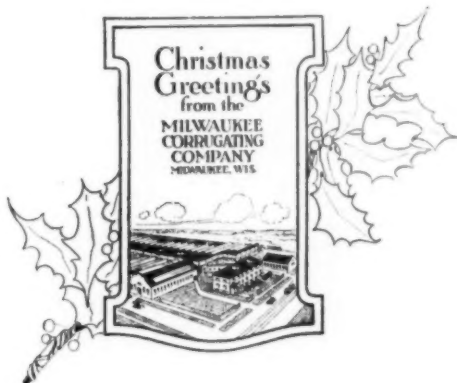


DEC 26 1923

AMERICAN ARTISAN and Hardware Record

Vol. 86. No. 25. 620 SOUTH MICHIGAN AVENUE, CHICAGO, DECEMBER 22, 1923. \$2.00 Per Year.



A GAIN at this happy Christmas Season may the mellow merriness of long ago come romping into your home and business life and remain throughout all of 1924.

On this day, of all the year the best, when the spirit of good will towards man is paramount in all our hearts, sincerely we wish you true happiness — contented retrospection of past events in home, social and business affairs — bright thoughts of the coming year.

Consider our hearty handclasp as coming with this earnest greeting for your merriest Christmas and happiest New Year!

Milwaukee Corrugating Company

Milwaukee :: Kansas City :: Minneapolis





NOW you are able to get Standing Seam Horse Head Zinc Roofing. It is shipped in casks complete with nails, clips and instruction sheets. Each cask is sufficient to cover one square.

Zinc roofs endure. They do not rust. They need no protective coatings. They will not leak.

If your regular jobber cannot supply you, write us direct.

The New Jersey Zinc Company

Established 1848

160 Front Street, New York City

CHICAGO · PITTSBURGH · SAN FRANCISCO · CLEVELAND
Mineral Point Zinc Company · The New Jersey Zinc Sales Co.



The world's Standard for zinc products

Founded 1880 by Daniel Stern

Thoroughly Covers
the Hardware, Stove,
Sheet Metal, and
Warm Air Heating and
Ventilating Interests

AMERICAN ARTISAN and Hardware Record

Address all communications
and remittances to
AMERICAN ARTISAN
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HARDWARE RECORD
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CHICAGO, ILLINOIS

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WHO IS TO BLAME FOR CUT-THROAT COMPETITION?

During the meeting of furnace manufacturers which was held recently at Urbana, Illinois, where the Educational Research Residence is to be built and used for testing furnaces and other warm air heating apparatus, under true-to-life conditions, there was a group at the dinner table on Monday evening in which the subject of competition came up.

One of the men made the remark that competition was all right so long as it was based upon actual facts and justifiable conditions, but that much of the present-day competition is caused by ignorance, pure and simple.

Let it be admitted at the start that there are probably more people to whom price argument appeals quicker and more forcefully than anything else.

So there is a measure of justification for that sort of argument in selling furnaces.

But only within certain limitations!

There are only two acceptable reasons for selling an article at a price less than its cost.

One is that it is faulty in some way. It may be in style, appearance, present usefulness. In other words, the article, properly speaking, is worth less than it cost originally.

The other is the necessity for raising money quickly—no matter at what sacrifice. An overstock, with its usual attendant of being hard pressed for real cash, may be classed as a justifiable reason for selling at less than cost, because it may tide the owner over a crisis.

But these two conditions can safely be given as the only two "justifiable" reasons for selling at less than cost price.

Which, of course, precludes at once a continued selling at less than cost.

And the contractor or installer whose selling price is considerably lower than the average price charged by others for the same or similar furnaces, is almost certain to be running into a hole of loss, although he may not realize it.

For, taking everything into consideration, there is very little difference in the operating costs within the same branch of business in the same locality.

In other words, the consistent low price setter is almost certain to sell his furnace and his installation work at too low a price to allow him a fair profit, and frequently the transaction results in an absolute loss.

Well, why does he quote the low price?

For no other reason than that he does not know what his cost is!

And what remedy is there?

None, except education.

So we must have strong, incontrovertible proof that we are right and that he is wrong, when we start out to educate him.

This is one of the things that the Educational Research Bureau will be able to do for the industry, when it is started, as it ought to be, next summer.

Many manufacturers have done much good toward bringing their installers up to a higher plane of business efficiency, in this and other matters, but it must, after all, be some impartial third party who is to bring about the stopping of cut-throat competition.

Random Notes and Sketches.

By Sidney Arnold

On behalf of the management I am glad to have this opportunity of wishing every one of the readers of AMERICAN ARTISAN a very happy Christmas.

* * *

Harry Van Bayse, of the American Furnace Company, gave me a cigar the other day when I was in his office. On the tissue wrapper I noticed the following imprint: "Doesn't smoke or go out at night." This applies to his furnace, of course.

Here is a story that he told me:

An old darky got up one night at a revival meeting and said: "Bruders an' sisters, you know an' I knows dat I ain't been what I oughter been. I'se robbed hen roosts an' stole hawks, an' tole lies, an' got drunk, an' slashed folks wi' mah razor, an' shot craps, an' cussed an' swore; but I thank de Lord der's one thing I ain't nebber done; I ain't nebber lost mah religion."

* * *

Last Saturday the air was blue—not the sky—in Cleveland. An indignation meeting was held in the office of Tony Howe, at which Dick Moncrief, Tom Henry, Eddie Fox, Eddie Stollenmayer, Charlie Seelbach, George Thesmacher and about a dozen others were present, and what they had to say about Dick Little, who presides over the "Line-o-Type or Two" column of the *Chicago Tribune*, simply is unprintable. It would burn the paper and Uncle Sam would slap me on the wrist for printing it.

Here is what they are kicking about:

Cleveland, where the Republicans are going to hold their convention next year, is in Ohio. We were all wrong in thinking that either Cleveland, Tennessee, or Cleveland, New York, was the Cleveland named by the national committee. Cleveland, Ohio, according to the gazetteer, is a very pretty town in Ohio and is

the county seat of Cuyahoga County, on the Cuyahoga River.

It is on the south shore of Lake Erie and enjoys a temperate climate, with a mean annual temperature of 50 degrees and a mean annual rainfall of 37.6 inches, which isn't so mean when you consider that Arizona has practically none at all. Cleveland was named in honor of President Grover Cleveland, who laid the town out during his first administration. It will be laid out again by Hiram Johnson if he fails to get nominated there.

It is a good thing that Dick Little's legs are twice as long as Dick Moncrief's, or he might get into trouble when he arrives in Cleveland to report the society features of the Republican Convention.

* * *

Bill Laffin, of the TeeBee folks, sent in the accompanying illustration, clipped from the *American Legion Weekly*, as a suggestion for



a hint on Christmas presents. It arrived too late, however, but a coal scoop is always a nice thing to give "Mother."

* * *

Dick Wiechert, who makes furnaces in Belleville, Illinois, shipped me a brick the other day. I thought at first that it was one of those stones that fell from his heart when he knew definitely that he could have a full page in the

1923 Warm Air Furnace Special, but when I opened the package I found that it was topped off with a piece of polished, dull finish aluminum and that it is intended to take the place of a blotter.

Thanks, Dick, it will come in handy when I sign checks, etc.

* * *

Here is what Dick Moncrief says he saw on a sign over an eating place, while on a recent trip out West:

"Marigold Grille announces their opening at 11 a. m. today. Formerly Ye Oregon Grille, Broadway and Stark. . . . All lady waitresses."

Dick did not state whether he patronized the place.

* * *

They say "back in the old country" that if you wait long enough you may be king of Sweden.

But here is the saying that it will pay you to keep in sight every day of your life

"All things come to him who waits"—

But here's a rule that's slicker: The man who goes for what he wants

Will get it all the quicker.

* * *

Here is a bit of verse that seemed so "worth while" to me when I first read it that I am going to pass it on to my friends:

Keep a Steady Gait

Life is fraught with many cares—

The road is sometimes rough;

At many turns unseen snares

Await one sure enough.

You may be jostled by the throng

From early morn till late,

But boldly push your way along

And keep a steady gait.

Should misfortune wreck your plan,

Don't give up the fight—

Meet it bravely like a man

And keep your "goal" in sight;

Don't charge your failure to "hard luck,"

Or to "an unkind fate"—

Push right ahead—just show your pluck

And keep a steady gait.

Come On, Fellows! — Why Hide Your Light Under a Bushel? — Says Turton.

Thinks This Is a Concrete Example of Bad Pipeless Installation Quite in Keeping with Handling of the Work.

IN OUR issue of October 20th, page 27, "Subscriber" wanted to know what was wrong with his pipeless furnace installation. A solution was given to "Subscriber" by "A Warm Friend," but this solution has evidently rubbed the cat's fur the wrong way—or what shall we say so as not to arouse the ire of Mr. Turton, Niles, Michigan?

Mr. Turton has the following to say in regard to the problem and the solution offered by "A Warm Friend":

TO AMERICAN ARTISAN:

In the October 20th issue a "Subscriber" aired his pipeless troubles

and asked assistance. So far no one has lent a helping hand, and "Subscriber" would be justified in saying, "This is a cold, cold world."

True, G. H. Landwehr, of the Holland Furnace Company, came back promptly in the October 27th issue with a suggestion to put in a "45" Holland pipe job. Further suggested that the present pipeless be polished and added to a collection of antiques.

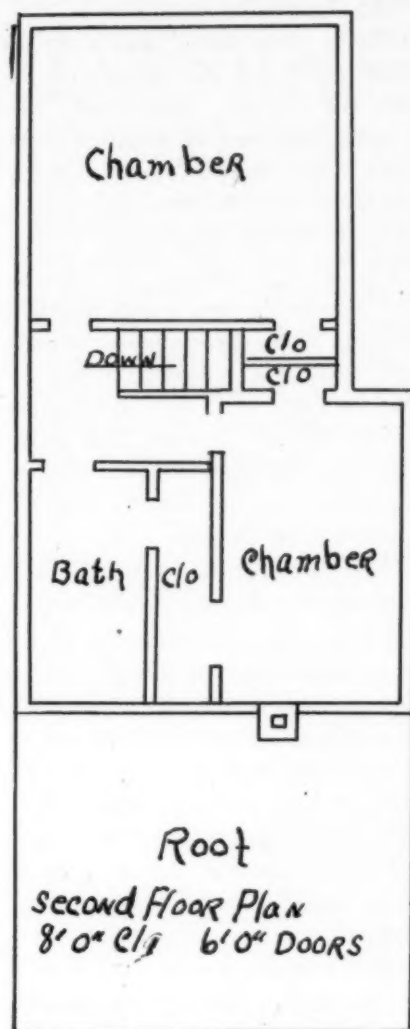
This admits the pipeless has him baffled, so he wanders from the text. "Subscriber" has a pipeless already installed. He did not ask for a pipe installation. Nor did he indicate any intention of making a donation to any collection of antiques. Hence he has received no assistance from the suggestions offered.

Mr. Landwehr makes a negative implication with ridicule before having sufficient information for even an intelligent guess. We've had quite an abundance of guessing in pipeless heating. Success Avenue starts from the foundry of facts—not from the fountain of guesses.

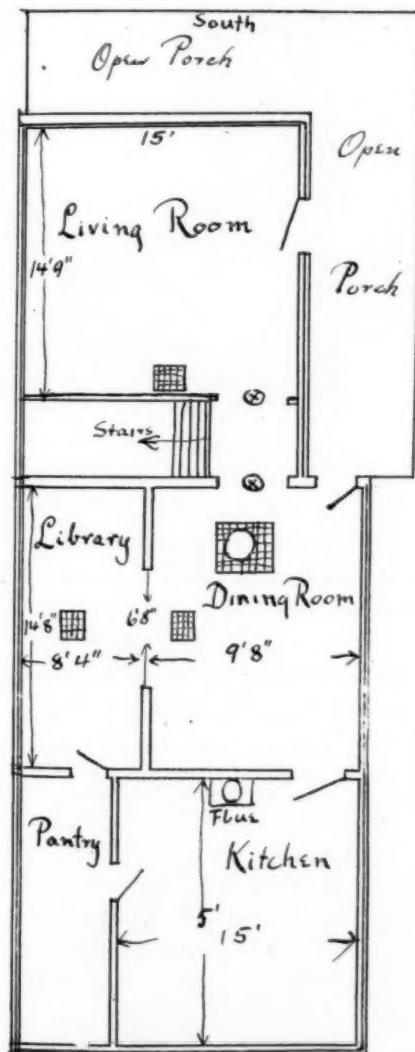
The best engineer in the country could not offer intelligent assistance from the plan submitted by Mr. "Subscriber." Several of the vital and influencing factors were neither given nor indicated. Any suggestion for help could be no better than a guess equally as bad as the first installation.

In answer to my article in November 10th issue, Mr. "Subscriber" wrote me and I have since secured the information necessary, and have suggested to him a remedy for his troubles.

Here is a concrete example of bad pipeless installation quite in keeping with the usual handling of this work. A splendid opportunity to learn why the disgusting failures and how to have real home comfort by intelligent procedure. In the past month more than a dozen requests



Plan Submitted by Mr. Turton for Second Floor.



Plan of First Floor Shown in Previous Issue.

have been received from heating men anxious to get more light on the baffling factors in pipeless heating.

Here is a chance. Plans give full information. As near as possible, uniform temperature desired in all rooms.

This problem seems easy enough. Present installation is a failure. Let that be a caution. To solve this correctly, the most experienced pipeless man will find his ingenuity taxed to the utmost.

Let's have a solution in every issue until this problem is thoroughly minced and analyzed. I have the solution now, but more benefit can be had from individual effort in advance.

Size or name of heater to use is not necessary. Location and accessories—if any—with plan of installation is all that is desired.

Mr. Landwehr says, use a "45" Holland. Any one of five score of other makes will do just as well; in fact, the 21 Mr. "Subscriber" has is quite sufficient if installed correctly. Any pipeless furnace on the market with sufficient capacity can be made to heat this house.

I'll go still further. I'll wager Mr. Landwehr that I can install a Holland as a pipeless and comfortably heat this residence with less fuel than his "45" will, installed as per his plan in October 27th issue. His own pipeless will take care of the return air far better than the suggestion he outlines.

This is not ridicule, nor attempt to "slap back," because of difference of opinion. This house can be heated as he suggests, even though he uses unnecessary return ducts, or ducts fifteen feet longer than needed, or even though he proposes to carry the entire return air from second floor across the dining room floor. Burn sufficient coal and you can do all this. But it is efficiency and comfort with economy we are after, not consumption of coal.

And it can be done in this case (and most others as well) with a pipeless. Master this one and some of your other bafflers will fade away.

Here's hoping first remedy will appear in next issue.

Sincerely,

GEO. W. TURTON.

Niles, Michigan.

Simms Foundry Corporation, Racine, Increases Capital to \$500,000 and Produces New Furnace.

The capital of the Simms Foundry Corporation, Racine, Wisconsin, of which Horace R. Simms is President, has been increased to \$500,000, for the purpose of enlarging the branch factory.

The company has recently prepared for jobbers and installers descriptive matter detailing its new Simmplex pipe and pipeless warm air furnaces.

The manufacturers claim many new and improved features for these furnaces, chief among which are the

1-piece cast iron radiator, the extra high combustion chamber and the permanently connected grate bar shaker which shakes or turns all four bars at the same time.

The descriptive matter which the manufacturers are supplying at request contains excellent illustrations of both the pipe and pipeless warm air furnaces. These illustrations are in cross-sectional views; the pipe



Simmplex Pipe Warm Air Furnace.

furnace illustration is shown here-with.

Specifications and list prices for the two furnaces are also given in a neat and easily readable table.

The back cover of the mailing circular, for such it is, is occupied with four testimonials regarding the furnaces; namely, The Manny Heating Supply Company, 131 West Lake Street, Chicago; Northwestern Furnace & Supply Company, Minneapolis; The Meyer Furnace & Supply Company, Milwaukee; Lee-Coit-Andresen Hardware Company, Wholesale, Omaha.

Indiana Foundry Men Will Meet at Purdue University, Lafayette, January 18 and 19, 1924.

Furnace and stove manufacturers will be interested in learning that the Engineering Extension Service of Purdue University has arranged for the Second Annual Conference

of Indiana Foundrymen, to be held at the University in Lafayette, January 18th and 19th.

The announcement of W. A. Knapp, Assistant Director of the Engineering Extension Service, follows:

Conference for Indiana Foundrymen.

The Engineering Extension Service of Purdue University announces the Second Annual Conference of Indiana Foundrymen, which is to be held at Purdue University on the 17th and 18th of January. This conference will be of interest to manufacturers using foundry products as well as foundrymen. No effort is being spared to secure men of national reputation along foundry lines to lead in the discussion of foundry problems and a very interesting program is assured.

A similar meeting held last year resulted in the formation of the Indiana Foundrymen's Association and the First Annual Meeting of this Association will be held in connection with this conference.

Koenneman Likes Articles on Warm Air Furnace Installations.

Out in Iowa, William C. Koenneman is known as "Gilt-Edge Bill." Like all good furnace men, Bill reads *AMERICAN ARTISAN* every week, and like some of them, he tells us once in awhile that he finds something worth while in it, as follows: To *AMERICAN ARTISAN*:

Allow me to congratulate you on your editorials, also on your articles on better installation.

This is something that is absolutely necessary, and is the thing that will bring warm air heating to a place where it will be recognized as the best form of heating for the home, that it is possible to have.

So keep up the good work you are doing along this line, and take it from me, *AMERICAN ARTISAN* is a d— good trade paper to read. I look forward to my copy every week. Very truly yours,

WILLIAM C. KOENNEMAN.

Fort Dodge, Iowa, December 14, 1923.

Getting Furnace Repair Business Opens Door for Future Sales.

The man who gets the furnace repair business is the man who goes out and wakes people up to the fact that their furnaces probably did not give good service the year before. Common sense logic gets a dealer farther in the end than a lot of high sounding phrases.

The accompanying reprinted advertisement is an example of a bid

furnace installation more intelligently.

The illustration could have been a little smaller which would have permitted the use of larger type in the body.

R. J. Schwab & Sons, Milwaukee, Issue Circular Describing Automatic Humidifier.

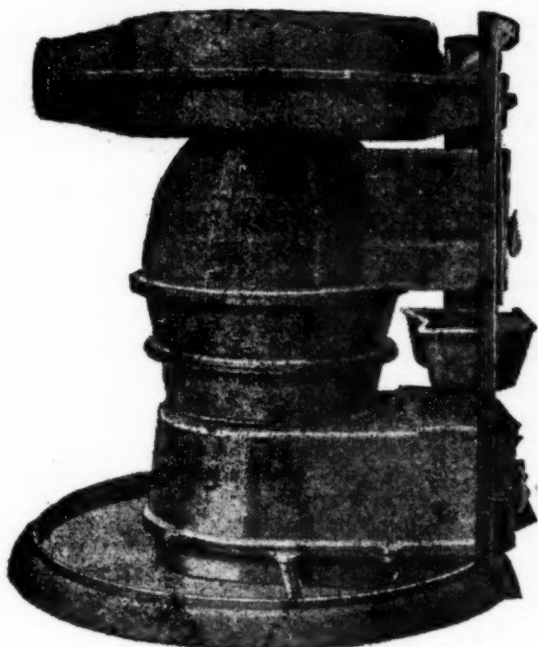
The humidity required in an artificially heated dwelling medical authorities calculate to be from 35 to 50 per cent for good health. To

midity than the warm air furnace and its accessories.

R. J. Schwab & Sons Company, manufacturers of Gilt-Edge furnaces, Milwaukee, Wisconsin, have got out a circular describing their float valve attachment designed to maintain any humidifier tank water level desired. The device as shown in the circular is attached to the outside of the furnace, works automatically and in no way affects the heating qualities of the furnace.

For further information write for Gilt-Edge Automatic Humidifier circular.

There is Only One Answer



If your furnace did not give satisfactory service last winter **Something is wrong.** If it needs repairing or remodeling, that is our job and we can take care of it.

If a new furnace is needed, we will inspect the conditions to be met, recommend the right type of furnace to meet the requirements, and install it **properly.** Today, not tomorrow is the time to give this matter attention.

Agents for
TITAN SUPERHEATER FURNACES

Pipe or Pipeless

I. E. FOTHERGILL

Phone L-593

504 Grant Street

Sycamore, Illinois

This Advertisement Shows How Repair Work Opens Way for New Furnace Business.

for furnace repair work. It appeared in the *Sycamore, Illinois, Tribune*. It serves a dual purpose in that it keeps the furnace man requirements. In repairing a furnace, he gets first hand information regarding its condition. In that way, if he keeps a card index, he can solicit his prospects for a new

maintain this percentage of humidity a room 10x10x12 feet requires the evaporation of about one gallon of water every 24 hours. An ordinary six-room house would require approximately ten gallons of water each 24 hours.

There is no method of supplying artificial heat to a dwelling better suited and able to provide this hu-

Business Does Not Stand Still; Either We Retreat or We Advance.

All things are in a constant state of evolution. Business itself is no less free from this law than any other phase of social development. Business methods and processes are vastly different than they were a few years ago. With the ushering in of the twentieth century came the great industrial combinations, whose very growth indicated their usefulness in the new scheme of things commercial, and so it is in the facilities that pertain to agriculture and to finance. It is this constant change that takes place almost unconsciously which we should not lose sight of in our perspective of the present and future commercial situation. Our ideas become warped because we foolishly refuse to recognize the new order and adapt ourselves thereto.

Gaskill Puts Over Idea of Sunbeam Comfort by Clever Contrast.

The impression which your advertising makes upon your prospective customers will determine the number of sales which you can trace directly to that expenditure.

It, therefore, behooves you to use every means in your power to create exactly the impression you wish to build up in the minds of those persons you wish to make your customers.

The furnaces you carry are made of castings so designed as to form a

heat producing machine when assembled.

The degree of efficiency attained by that machine will depend upon the accuracy with which it is designed.

Your customers, however, are not primarily interested in exactitude in design, but in results.

Results, then, should be the key note of your sales policy, and the more you work for and stress results, the more lasting will be your prosperity, once you have the ball rolling, and the less you will have to fear from competition.

The accompanying reprinted illustration was taken from the *Lewistown, Illinois, Record* and it shows that George H. Gaskill has struck the proper key-note in selling Sunbeam Furnaces, made by the well known Fox Furnace Company, Elyria, Ohio.

"Buy Comfort—Not a Pile of Castings" sums up in a few simple,

well chosen words the entire situation. The illustration and the headline effectively put the idea across in less time than it takes to tell it.

This is the aim of advertising and it's up to you to help it do its work.

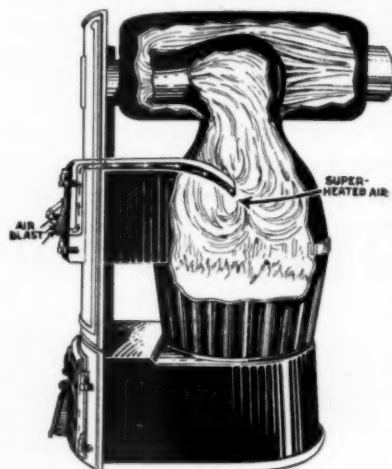
Hero Furnace Company Perfects New Air Jet to Assist Combustion.

Experiments have proved that during the process of combustion in the furnace combustion chamber there is not sufficient oxygen remaining in the air after it passes through the hot bed of coals to complete the combustion of gases; consequently much of this volatile matter passes unburned up the chimney.

The Hero Furnace Company, Sycamore, Illinois, has worked out a method of introducing superheated air above the bed of coals in such a way as to cause it to rapidly unite with these volatile but un-

burned gases in their upward passage, causing them to ignite and burn before leaving the combustion chamber. In this way greater efficiency is obtained from the coal burned.

burned. The air is taken in from the outside by the draft, but before



Illustrating Hero Principle.

reaching its destination above the coal bed it is heated by being reflected several times from the hot surfaces during its passage.

This device is described in a 7x 12-inch leaflet recently issued by the company and can be had by writing them at Sycamore, Illinois.

W. J. La Porte Believes Your Robber Pipe Is Not Large Enough, Mr. Rose.

The general opinion with regard to the problem of properly heating the bathroom of C. B. Rose in our December 1st issue seems to be that the pipe with which Mr. Rose is attempting to heat the room is not large enough.

W. J. La Porte, —, Michigan, gives a solution to the problem, together with a sketch, which he believes will do the trick. His letter follows:

TO AMERICAN ARTISAN:

In your issue of December 1, C. B. Rose asks why the 8-inch pipe which he ran to his bathroom does not heat well.

I am taking the liberty of offering an explanation which will help Mr. Rose or any of your readers interested.



**SUNBEAM
FURNACES**

**Buy Comfort—
Not a Pile of
Castings**

THE Sunbeam Furnace is not simply a large metal drum with a fire pot and a few odd castings. It is a scientifically designed, carefully proportioned heating plant—the outcome of many years of close application to heating problems and their solution. We'll be glad to give you an estimate.

WARMs LIKE ~~FURNACE~~ THE SUN

GEO. H. GASKILL

Note Forceful Illustration in Furnace Ad.

There is only one reason for this pipe not giving satisfactory heat and that is, it is not properly installed, the air circulating through casing with such a force, and main heat pipe being so much larger than the 8-inch pipe, that the air just passes on through the main heat pipe with-

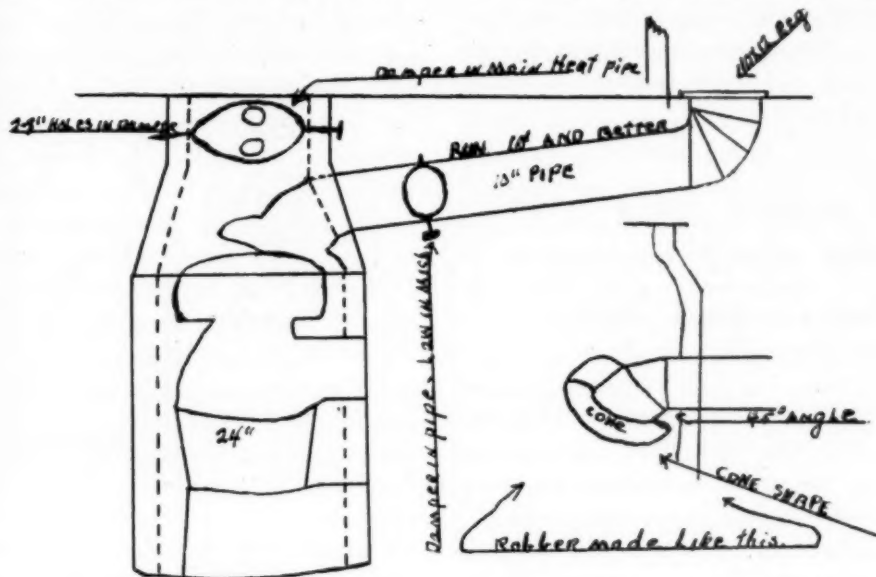
price if you can give him a perfect heating plant.

Hoping this will be of some benefit to Mr. Rose or anyone else, I remain,

Yours very truly,

W. J. LA PORTE.

—, Michigan, December 7, 1923.



W. J. La Porte Tells Why He Believes Robber Pipe of Mr. Rose Is Not Large Enough.

out even thinking of stopping for his 8-inch pipe.

I am also submitting a rough sketch showing how I have installed over 100 pipeless furnaces with runs to bath and which have proved a wonderful success.

Mr. Rose's 8-inch pipe running to bathroom may be all right with my system of installing, but as for me, I have no faith in any heat pipe under 9 inches in diameter. If Mr. Rose will install his pipe to bath with a 10-inch pipe with robber, and damper in warm heat pipe like the sketch shows, he will find it to be a decided success. The damper in main heat pipe should have two 8-inch holes for 24-inch fire pot furnace, and two 6-inch holes for 22-inch fire pot furnace. The bathroom can be heated to a temperature of 65 degrees, and by closing the main damper, it can be heated to 80 degrees if desired, and still get plenty of heat to other parts of the building.

Of course, this way of installing adds a few dollars more to the expense, but remember, men, your customer will never kick on the

Shouldice Brothers Put Premier's Message Across with "Pep."

Advertising in its purely physical sense has about as many sides to it as man has natures, but the advertising which is always sure of hitting its marks is that which has singled out from the vast group of humanity that class or group of

people whom it wishes to make its customers.

We all know that there are certain qualifications which must be peculiar to the prospect before he becomes an active possibility.

Everybody wears stockings, but everybody does not buy furnaces, and so it is to this latter group that the furnace installer must make his appeal.

What are his prospect's likes and dislikes? is a question that must be answered before an intelligent appeal can be made.

The economy feature generally can be used, although it usually must be qualified in some way or other.

Guarding the health with proper ventilation in the home is one of the strongest selling points which the warm air furnace heating plant has, and this feature should not be abused.

The accompanying advertisement taken from the *Battle Creek, Michigan, Journal* has many good features. It is brief and to the point. It gives those desiring further information on the subject ample opportunity of making known their needs and desires.

The optimist is a man who has a good time wherever he goes because he carries his good time with him.



**PIPE
and
PIPELESS
FURNACES**

PREMIER
Dowagiac Mich.

**The Finest Warm
Air Heater Made**
for those who want
the best at a moderate
price.
Our heating engineer
will gladly advise
you concerning your
heating problems
FREE.

**SHOULDICE
BROS.**
Sheet Metal
Works
79 W. Jackson St.
Phone 246.

Getting the Premier Message Across Where It Will Do the Most Good

Register Temperature Should Be 135 Degrees Fahrenheit.

In our report of the proceedings of the Annual Meeting of the Western Warm Air Furnace & Supply Association there appeared in the first paragraph of the third column of the first page this statement:

"These figures have been arrived at by taking the area of the grate in square inches, and adding 50 per

cent. Further, they are based on heat losses as determined by our present Code, and on returning the air to the furnace at 60 degrees, and delivering it at 195 degrees, at the register, and burning between three and four pounds of coal per hour per square foot of grate area, when the thermometer is at zero outside."

The register temperature that was used in the computation is 135 degrees.

Cortright Travels in Comfort with Family While Selling Warm Air Furnaces.

Has Completely Outfitted House Car Bearing Advertising of Homer Furnace Company Products.

BEING "on the road" and yet with all the comforts of home, is a problem that has been solved by L. H. Cortright, of The Homer Furnace Company. He travels in a house car, sleeps, eats in it and has his family along. Surely a fine way to beat the landlord.

The accompanying illustration shows two views of the Good Will car which the Homer Furnace Company has sent through to the Pacific Coast, under the charge of Mr. Cortright, whose family is accompanying him on this trip. He is calling on all Homer dealers be-

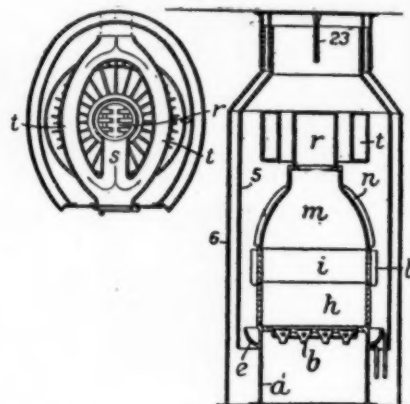
cessory line of fireplace equipment and coal chute doors.

Reports from him say that every stop consumes several hours in which he must answer questions relative to the Homer products, which are illustrated on the sides of his car.

You Will Recognize Illustration, But Description Sounds Strange.

Listed under the head of "Interesting Patents" in *Domestic Engineering*, London, England, the following illustration and description

burning stove surrounded by two casings 5, 6, the cross-sectional area of the space between the stove body and the inner casing 5 being, near the lower end, twice that between the casing 5 and 6 and preferably increasing upwardly to treble the same area. Cold air passes downwardly between the casings and upwardly between the inner casing and the stove body, and is finally



Coke and Coal Burning Stove Surrounded by Two Casings.

heated by passing around and through channels in a heat-radiating device comprising in the form shown a central circular chamber *r* through which the combustion products pass, by way of a branch passage *s* and lateral passages *t*, to the outlet. At the top of the stove is a grating, the outer portion of which forms the cold air inlet and is one-half to one-third of the central portion, which forms the outlet for the heated air. In order that the grating may lie flush with the floor beneath which the heater is placed, the top portions of the casings 5, 6 are made telescopic so that they may be adjusted in height. Hinged or sliding plates 23 serve to regulate the exit of air through the grating and to close the latter during cleaning operations. In modifications, the grating is arranged in the steps of a staircase, or in a casing resembling a gas radiator, or as a pedestal. The stove shown comprises a base and ash pit *a*, shaker bars *b*, a firepot formed of tubular members *h*, *i*, and a domed top *m* with external ribs *n*. Similar ribs *l* may be provided on the section *i*. An annular water-trough *e* for moistening the air surrounds the bottom section *a*."



Two Views of Homer Good Will Car, Guided by L. H. Cortright, Now on a Coast to Coast Trip

tween the factory and the Pacific Coast. His route west is over the southern route and he will come back over a northern route. He states that he is having wonderful success in placing new agencies, together with selling the Homer ac-

appears, apparently covering what we term a "pipeless warm air furnace":

"201,205. Marshall, T., 52 Ches-ter Square, London:

"Air-heating stoves for heating buildings comprise a coke and coal

Pittsburgh Sheet Metal Contractors Arrange for Better Technical Instruction of Apprentices.

Agreement Between Union and Employers Provides for Four Year Training at Carnegie Tech.

THE need of education has brought about another armistice between organized labor and employers. From Pittsburgh comes the report that 65 sheet metal union apprentices have begun a four-year training course at Carnegie Institute of Technology, and will be paid their regular wage by their employers for the time spent in school.

This record of another hand-clasp between labor and capital is the result of a novel agreement made between the Pittsburgh Local Union No. 12, Amalgamated Sheet Metal Workers' International Alliance and the Sheet Metal Contractors Association of Pittsburgh. While purely a local measure in its scope, the contract is regarded by educators, employers and union officials as the fore-runner of similar agreements to be made leading toward the proper training of union trade apprentices.

Among the novel, and somewhat radical terms of the agreement between the Pittsburgh local union and the employers, is the stipulation that every apprentice attached to the union "must and shall attend Sheet Metal Classes at the Carnegie Institute of Technology the last four years of his apprenticeship, or until he has finished the course for Sheet Metal Apprentices." The extent of coöperation to which the employers have committed themselves to assist in the training is recorded in the section of the agreement which says: "The employer shall send the apprentice to the Carnegie Institute of Technology for trade instruction one day each week from October 1 to May 1 during the last four years of his apprenticeship. The apprentice shall be allowed his regular wage for days while attending school."

At Carnegie Tech, a special course for the apprenticeship training has been outlined, the subjects

including shop work, pattern drafting, and mathematics. The class of 65 apprentice students has been separated into four classes, each group attending the Institute one full day each week. Each apprentice pays his own tuition fee.

As a reward for high scholarship in their studies at Carnegie Tech, special terms have been written into the agreement by means of which it has been made possible for a studious apprentice to receive increased wages. "As a reward of merit," says the agreement, "any apprentice receiving grade 'A' marks at the end of any school year shall receive two months credit on his next eight months' period, thus reducing that period to six months." As all of the apprentices are paid a definite scale of wages that is automatically increased every eight months, the scholarship plan gives each opportunity to secure his next regular increase two months earlier each year. The authorities at Carnegie Tech will coöperate by sending to the employers each month report cards showing the progress made by the respective apprentices.

A joint committee consisting of three members of the Contractors Association, and three union officials, has been selected to act in an advisory capacity between apprentice and school, to adjust all differences that may arise, to terminate the apprenticeship and services of the apprentice if necessary, and to pass upon the admission of the apprentice applicant to journeyman-ship.

Indiana Fur-Mets Issue Roster of Members.

A rather unique and original method has been adopted by the Indiana Fur-Mets in making up the roster of members and the firms they represent.

The names appearing on the roster are arranged in alphabetical order beginning at the upper left-hand corner and running down to the bottom, then continuing in the same order from the upper right-hand corner to the bottom.

Extending across the center of the sheet is arranged a standard galvanized sheet gauge and table showing weights per bundle without bands, square feet, sheet weight and number of sheets in one bundle. A table of comparison of wire gauges also appears, as well as a table of the circumferences and areas of circles.

The roster is very well arranged and adaptable to wall hanging.

Can Somebody Suggest a Way to Deaden Sound in Sheet Metal Shop of Oklahoma Contractor?

Here is a chance for somebody to do a good turn for a fellow sheet metal contractor:

TO AMERICAN ARTISAN:

I have a fine sheet metal shop. The size is 25x84 feet. Ceiling is 14 feet, covered with regular metal panels. Cement floor. There are three skylights, each 5x8 feet.

The back and front are all glass with brick pillars, sides being of stone.

The office is partitioned off with a wooden wall from the shop.

For some reason there is a strong echo in the building, so that whenever work is going on in the shop it is almost impossible for anyone to hear ordinary talking in the shop.

Does anybody know how this trouble can be remedied?

Yours truly,

OKLAHOMA.

Can Honeycomb Radiator Be Repaired?

TO AMERICAN ARTISAN:

Can any of your readers inform me if a Honeycomb radiator can be repaired where it is broken and leaks in about the center?

Yours very truly,

WALTER O'NEILL.

—, Minnesota, December 10, 1923.

Factory Heating Installations Often Contain Heads for Vent Stacks Where Two Elbows Grow Out of the Main Stem.

Problem Requires Careful Study and Is Nothing with Which the Amateur or Novice Should Experiment.

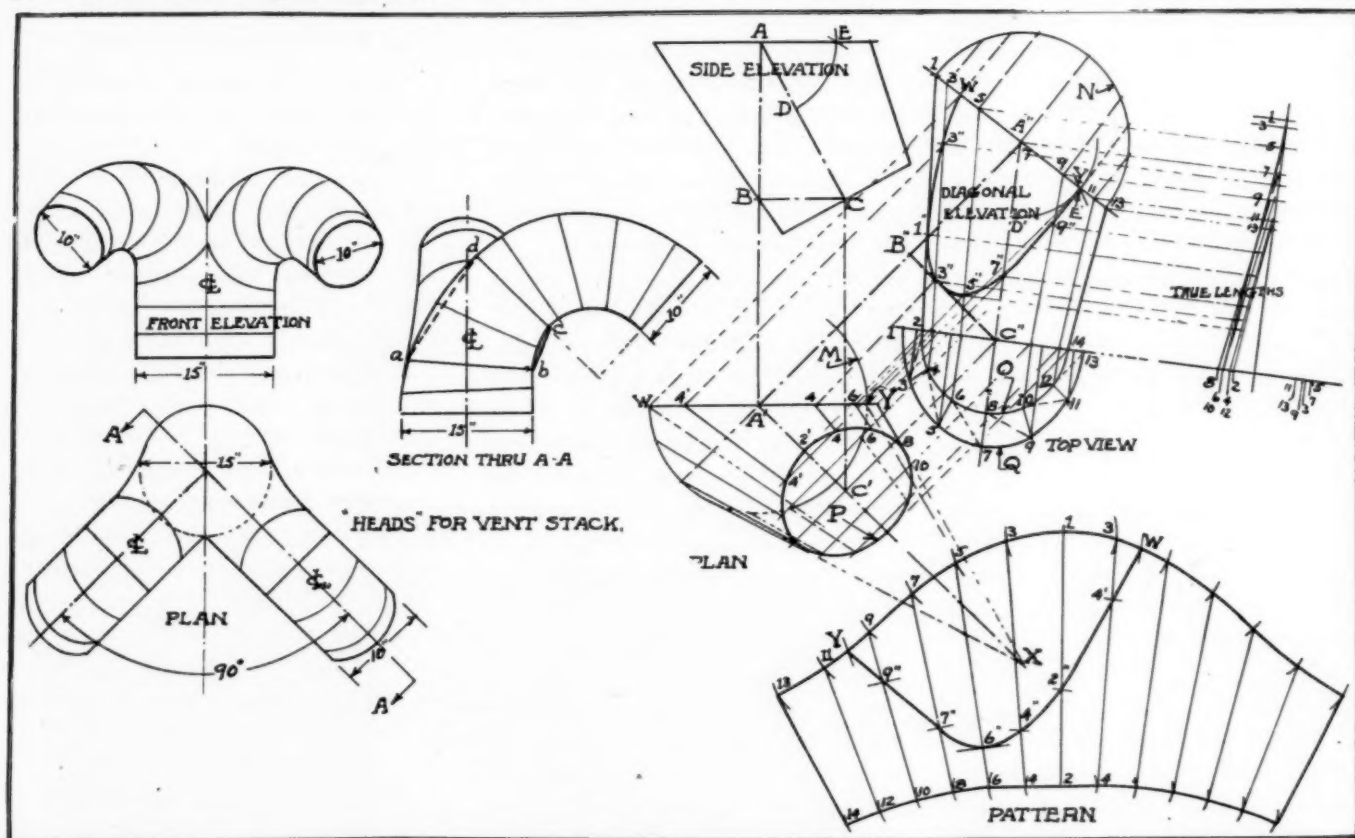
Written Especially for AMERICAN ARTISAN AND HARDWARE RECORD by O. W. KOTHE, Principal, St. Louis Technical Institute, St. Louis, Missouri.

IN RAILROAD shops, factories and workshops, where heating systems are installed, many peculiarly-shaped fittings are designed by the engineers. Some engineers permit the shop to do the work of adjusting the designs to practice, while others are quite jealous of the pet child of their imaginations and

case, however, a special transition was built, as a-b-c-d-a in the dotted line. After this an ordinary 90-degree elbow was added, which completed the fitting. Even with this adjustment the layout becomes quite difficult and is nothing with which a novice or amateur may experiment, unless he has the fundamental

shows a 90-degree, so line A'-C' of our working drawing will be on a 45-degree and shows an offset of 6'-C' in plan. This is all that is needed at this time for plan.

We next draw the diagonal elevation by squaring out a line A'-A' at right angles to A'-C'. We do the same with C' as C'' and then at any



Working Drawing for Double Angled Tee Intersection.

insist that their plans be strictly followed.

In the drawing shown we have a peculiar shape where two elbows grow out of a main stem. The sectional view A-A gives a good idea of what is desired and it also shows the difficulties into which a person can sometimes fall where specifications are strictly followed. In this

knowledge on which to base the various needed steps.

So we transfer the axis line not shown in section A-A, by working from the center line, and making side elevation, letting A-B be the rise, and B-C the offset. Then we describe the section M of plan from A' and drop C from elevation to C' in the plan. As the sketch plan

convenient place we draw B''-C'' parallel with A'-C'. Now, pick the rise of elevation A-B and set as B''-A''. Join A'' with C'' and you have the diagonal elevation axis line. After this we transfer the angle of elevation as B-E as D'-E', which enables us to draw the line 1-13, and also describe the half section N, which is divided in equal spaces.

Also describe the half section O for the bottom, where line 2-14 is drawn at right angles to A"-C". Divide this section O in the same number of parts as N and square lines to the base line. After this fill in the body lines of the elevation as shown. Our next step is to develop that oval P in plan, which is that view obtained when looking along the line 2-14 of diagonal elevation. From all these points in 2-14 we project lines back to plan so that they are parallel with A'-A" and then develop the oval by means of the half diameter line in section O. After this we draw the miter line W-Y through A', which will be the miter in the throat of the branch. We then draw the side lines of our plan to an apex X and from X we radiate the lines 4'-2'-4-6-8-10 back into the miter line W-Y and this establishes those points as shown. From here we carry them back into the diagonal elevation, which established points W-3"-1"-3"-5"-7"-9" and Y and gives that miter cut shown. This will be the miter cut for the throat where the two branch pipes will fit together in the throat and angle outward.

After this we develop the half plan of diagonal elevation as Q, then the lines drawn between O and Q will represent a top view or plan of this straightened out position. With these we develop the true lengths and when the solid lines are developed, the points in the miter lines are projected to the true lengths, thereby cutting them off. The pattern is laid out the same as any ordinary taper joint with oblique ends, and when the outline is finished, and the solid lines filled in, the shortened true lengths are picked from diagram and set off on these lines in pattern as 4'-2"-4"-6", etc. This will give the portion to cut out of the paper pattern for the throat of the branches. Extra laps allowances must be made for riveting.

One of the important things to impress upon a clerk's mind is that any customer with a complaint he cannot satisfy ought to be turned over to the proprietor and not allowed to go away disgruntled.

Labor Unions and Sheet Metal Contractors Working to Solve Apprentice Training Problem.

That labor unions as well as employers are growing more and more concerned about the apprentice problem is shown in two recent developments toward the training of apprentices at Carnegie Institute of Technology, Pittsburgh.

One of these organizations is the local of the International Wood, Wire and Sheet Metal Lathers' Union, which has effected a working agreement with Carnegie Tech whereby the union apprentices to the union will be trained there.

The other development is the result of an agreement between the Local Union No. 12, Amalgamated Sheet Metal Workers' International Alliance and the Sheet Metal Contractors' Association of Pittsburgh. The agreement takes on added significance from the announcement that the employers have agreed to pay the apprentices their full wages for the day they spend in classes, and the union officials have taken the responsibility of compelling attendance to classes.

While both of these movements are unique, officials of Carnegie Tech and others interested in apprentice training consider them as indicative of a growing tendency among both labor union officials and capitalistic interests to cooperate toward the solution of the apprenticeship problem.

The final enrollment of the sheet metal lathers' apprentices took definite shape at a recent meeting of the local union of the International Wood, Wire and Sheet Metal Lathers, when C. E. Donnelley, Director of Industrial Relations at Carnegie Tech, conferred with the members and addressed them in open meeting.

Among the novel and somewhat radical terms of the agreement between the local Sheet Metal Workers' Union and the Pittsburgh Sheet Metal Contractors' Association for the training of apprentices is the stipulation that every apprentice attached to the union "must and shall

attend Sheet Metal Class at Carnegie Institute of Technology the last four years of his apprenticeship, or until he has finished the course for sheet metal apprentices."

A special course for the apprenticeship training has been outlined at Carnegie Tech, the subjects including shop work, pattern drafting and mathematics. The class has been separated into four sub-classes, each group attending the Institute one full day each week. Each apprentice pays his own tuition fee.

As a reward for high scholarship in their studies at Carnegie Tech, special terms have been written into the agreement, by means of which it has been made possible for a studious apprentice to receive increased wages. "As a reward of merit," says the agreement, "any apprentice receiving grade 'A' marks at the end of any school year shall receive two month's credit on his next eight months' period, thus reducing that period to six months."

A joint committee, consisting of three members of the Contractors' Association and three union officials, has been selected to act in an advisory capacity between apprentice and school.

Washington Sheet Metal Contractors Invite Brethren to Attend National Convention in June.

The following letter has been received from Max Walten, Chairman of the Publicity Committee of the Washington, D. C., sheet metal contractors, in connection with the National Convention of the Association:

TO AMERICAN ARTISAN:

The Washington Sheet Metal Contractors extend hearty greetings and best wishes for the New Year to the members of the National Association.

Start the New Year right and plan to attend the National Convention at Washington in June. Washington is a beautiful city and has many attractions for the visitor not offered by any other city. It is the Capital of your nation, the home of your President and of your

Congress. Whether national pride or curiosity is the motive, few people can afford to miss this extraordinary opportunity.

The Committee has selected the Raleigh Hotel as the Convention Headquarters. This hotel is one of the finest in Washington and centrally located. The rates are as follows:

Single room, \$3.00 and \$4.00, with bath, \$4.00, \$5.00, \$6.00 and \$7.00 per day.

Double room, \$4.00 and \$5.00; with bath, \$5.00, \$6.00, \$7.00 and \$8.00; single beds, \$6.00; with bath, \$7.00, \$8.00, \$9.00 and \$10.00 per day.

Special rates are being applied

for from the railway systems for the accommodation of those who will attend. Details will be published shortly.

It is the purpose of the Convention Committee to put a beautiful illustrated souvenir pamphlet in the hands of each member, which will show with illustrations what words fail to express of the beautiful Federal Buildings and other points of interest in your National Capital. We naturally look forward to a very large attendance and a most successful Convention in every way.

MAX WALTON,

Chairman, Publicity Committee.
Washington, D. C., December 17, 1923.

Thorough Incubation of Every Idea Must Precede Putting It into Operation.

Take a Lesson from a Setting Hen With Regard to New Ideas, Says Greenberg.

Written Especially for AMERICAN ARTISAN AND HARDWARE RECORD by J. C. Greenberg, Cleveland, Ohio.

BILL SLICKER was a queer sort of a bird. He always had a stock of ideas to give the other fellow that would make everybody rich over night. When I called on him last week, he had a brand new one on tap that beat anything he had ever sprung. We were sitting in his shop talking about nothing in particular, when suddenly he springs this one on me:

"I have an idea," said Bill, "that if consistently followed out, will bring profits in so quick that most of the shops would get heart disease. Just listen to this and see if it isn't a fine idea."

The telephone rang, Bill answered, but it was the wrong number, and Bill went on: "I have noticed," said he, "that most of the shops have no idea as to the real price a job is worth. They do not figure overhead, because they do not know how much to figure. The result is a misfigure and they get the job that most of the time is a loss. Now, here is my idea. Suppose that the highest overhead is 30 per cent in this town, and we all got together

and fixed a 30 per cent overhead on every shop, it would help out the business, and we could all figure on jobs, and the one who would get the job would really make real money. This is easy, simple and effective. What do you think of this for a peach of an idea?"

"I don't think much of it, Bill," I replied. "I believe that you would find opposition if you tried to present this idea to any body of sensible men."

"I don't see how you figure it out as a bad idea," protested Bill. "The man who has 30 per cent would get it, and the man who has only 20 per cent will make money on this system. Surely no one could object to an idea that is a sure winner."

I was about to reply, when Bill's boy, about ten years of age, came in all excited, saying, "Daddy! Oh, Daddy! my little red hen is setting on a nestful of eggs. Come on back into the barn and look at her, will you, Daddy?"

The little fellow was so earnest about it that we both decided to go back and look at the hen setting on

her eggs. We soon returned to the shop and were again seated as before, ready to begin where we had left off.

"So you don't thing much of the idea, hey?" resumed Bill. "Suppose you tell me what is the matter with it."

"Bill," I answered, "I was going to say something to you before the kid rushed in, but when I saw his little red hen, I changed my idea entirely. I know what the matter is, and the hen showed me what is wrong. It is not the idea that is wrong; it is you, Bill."

"Where am I wrong?" asked Bill.

"Did you notice what the hen was doing, Bill?" I asked.

"Sure I did," he replied, with assurance, "she was sitting on her eggs."

"What for, Bill?" I asked, innocent like.

"To hatch 'em, I suppose," Bill replied.

"That is it exactly, Bill," said I. "She was sitting on her eggs in order that they may hatch. Now, that little hen is sensible. She sits on the eggs in order to hatch them. She does not merely lay the eggs and expect to have chicks come out of the eggs all by themselves."

"What in Sam Hill are you driving at?" exclaimed Bill. "Anybody knows that. What has that to do with my idea about a standard overhead?"

"It has this much to do with it, Bill," I replied. "Whenever you lay an idea, it is just like a hen laying an egg—you have something. But if you would sit on the idea like a hen sits on her eggs, you would get right results. A man must sit on his ideas and study over them, just like a hen sits on her eggs. Your idea, besides being against the law, is impractical."

"Why is it impracticable?" asked Bill.

"Because," I answered, "the man who has less than 30 per cent of overhead would have to charge higher for the job, and the men who has the 30 per cent would not gain anything. Suppose you have only 18 per cent overhead, and you would

suddenly raise your selling price to accommodate your adopted 30 per cent, the out-of-town bidders would beat you to it every time, and you would never get a job; on the other hand, you would be a party to price fixing, which would be in restraint of trade, and you would get in bad with the law. Now, if you had sat on your idea like that little red hen sits on her eggs, you would have hatched out a solution that would be just like I told you a moment ago. The trouble is that you get an idea, and that is all. You do not study over it and see whether it is logical or not. Your idea is no good, and impracticable, and absolutely dishonest."

"I can't see it that way," insisted Bill.

"Of course you can't," I replied. "Neither can that little hen see her chicks till she sits on the eggs. Price does not need fixing. Price is all right, but the man in the business is all wrong. He does not know how to figure overhead, and there is no one who will enlighten him. If you would just sit on some good idea and work out a working plan, you would really do something that is worth while. But as it is, you are merely trying to propose a criminal idea that would get you all in trouble so fast that it would make your heads swim."

"I never thought about it the way you put it," said Bill, slowly. "I was under the impression that the idea was a good one."

"Well," said Bill, "what can be done to remedy this crazy bidding?"

"There is one thing that I can suggest," I answered, "that may do a great lot of good, and it is this: Suppose you sit on this idea and think over it. Go to the Y. M. C. A. or some business college and see if they will not open a class in accounting just for the men in this business. Let each one contribute say two dollars a week and this will defray the expenses of this scheme. If this can be done, in a few months the men in this business would get better figure sense and learn what bookkeeping means. This would help a lot, and would do a great

good. Just think it over and see what there is to it. Just forget your wild ideas, and remember that no idea is good unless you sit on it like a hen sits on her eggs."

President Perry of Iowa Auxiliary Urges Salesmen to Help Double State Association Membership.

President Edson Perry, of the Jobbers' and Salesmen's Auxiliary of the Iowa Sheet Metal Contractors' Association, has issued the following letter to the members:

Let the goal of the Auxiliary be doubling the membership in both the Iowa Sheet Metal Contractors' Association and the Auxiliary between now and our next convention in March at Fort Dodge. It can be done if we all work with that object in view and grasp every opportunity from now on to obtain new members in both the Association and Auxiliary for the year 1924. There are some very important questions that will come up at the next convention that will be of vital interest to every large and small shop in the state, and every salesman calling on them should be with us at that time.

If every present Auxiliary member will obtain one member for each organization between now and March 1st, we will win. Put all your pep into it and let's go.

Secretary Seabrook Is Coming to Iowa in January.

Edwin L. Seabrook, Secretary of the National Association of Sheet Metal Contractors, advises that he is planning on spending some time in Iowa in January. He will have time to visit two cities with a view to organizing local associations. What city wants him most?

Sheet metal contractors in cities that do not have a local organization and who would like to see one organized in their city are invited to write State Secretary R. E. Pauly, Mason City, Iowa, at once. Now is the time for you contractors in Davenport, Burlington, Ottumwa, Des Moines, Council Bluffs and other places to start something. What is your pleasure, gentlemen?

Notes and Queries

Automatic Repeat for Phonograph Records.

From L. E. Miller, Goodland, Indiana.

Will you kindly inform me where I can purchase a device that automatically repeats the record on phonograph.

Ans.—The Brunswick Phonograph Shop, 225 South Wabash Avenue, Chicago, Illinois.

Double Seaming Stake.

From Walter H. Ziegler, Muncie, Indiana.

Please advise me who manufactures a double seaming stake mandrel for seaming wall stacks.

Ans.—It is made by the Pick, Stow and Wilcox Company, Southington, Connecticut, and carried in stock by Joseph T. Ryerson and Son, 2558 West 16th Street, Chicago, Illinois, and Clark-Smith Hardware Company, Peoria, Illinois.

Generator for Gasoline Lighting Plant.

From L. E. Miller, Goodland, Indiana.

Please inform me where I can obtain a generator for a Litchfield or similar gasoline lighting plant.

Ans.—Knight Light and Soda Fountain Company, 2701 North Kildare Avenue, Chicago, Illinois.

How Is Old Sheet Copper Cleaned? From a Subscriber:

Please tell me what solution to use to clean old sheet copper which is covered with verdigris and dirt.

Ans.—To clean copper, take one ounce of oxalic acid, six ounces of rotten stone, one-half ounce of gum arabic, all in powder, one ounce of sweet oil and sufficient quantity of water to make a paste.

Apply a small portion and rub dry with a flannel or leather.

Another way to clean copper is to use soft soap and rotten stone made into a stiff paste with water, and dissolved by gently simmering in a water bath.

Rub on with a woolen rag, and polish with dry whiting and rotten stone. Finish with a leather and dry whiting.

Andiron and Fire Place Goods Window Display Which Put "Pep" Into Sales and Made Cash Box Ring.

M. E. Klasky Injects Interest Into Prosaic Subject for Kelley-Duluth Company, 118 West Superior Street, Duluth.

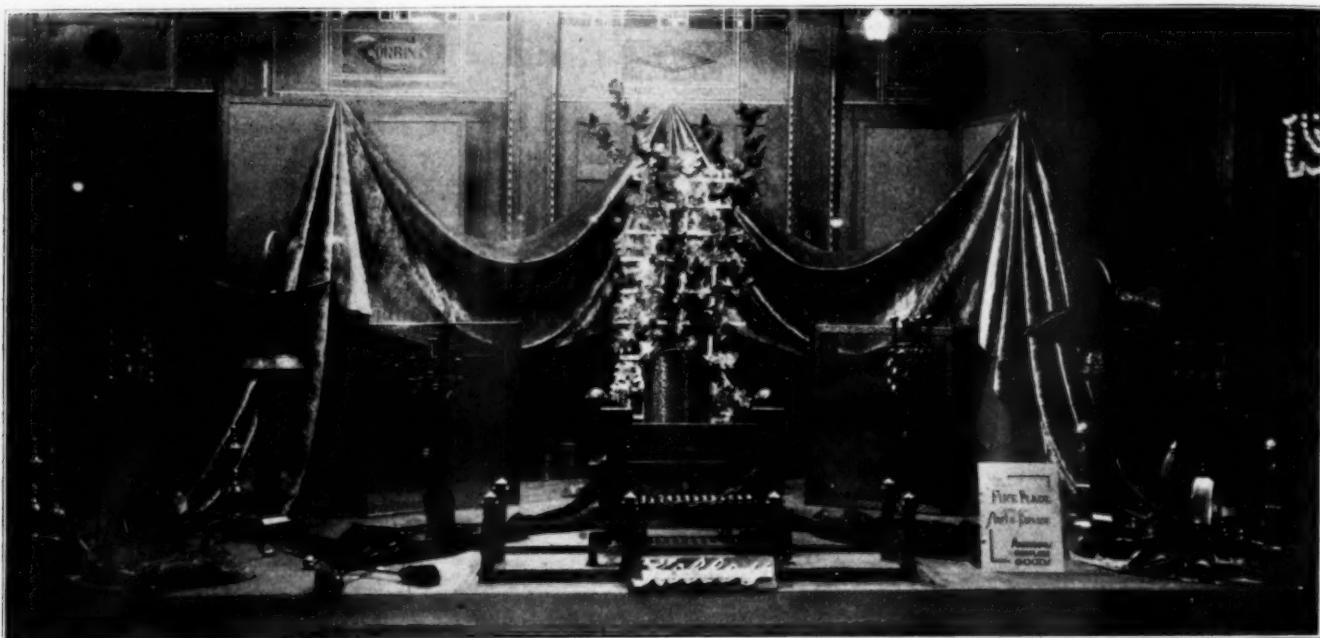
THERE is a custom at one of the oldest universities in the east that each Christmas Eve a Yule log is ignited in the fireplace of one of the men's dormitories and while it is crackling and shooting sparks into the chimney and glimmering shadows are flickering playfully about the walls, the president of the university delivers an address on the meaning of the Yule log for

window display was arranged for the Kelly-Duluth Company, 118 West Superior Street, Duluth, Minnesota, by Mr. Klasky.

Here indeed is an attractive display which creates interest and puts the subject across. It forces itself upon the passer, who is compelled to give it his undivided attention. It appeals to the artistic sense of every person, although there is nothing

peared. But he hasn't. It was a Christmas window display of unusual merit.

The center of the window contained a Yuletide tree, decorated. The floor was covered with "snow," etc. To the right of the tree stood a miniature table, fully laid for dinner, around which sat a dinner party, consisting of dolls of both sexes in dinner clothes.



Window Display of Andirons and Fireplace Goods Artistically Arranged by M. E. Klasky for the Kelly-Duluth Company, 118 West Superior Street, Duluth, Minnesota.

the benefit of the students who do not leave the university for the holidays. This time-honored custom has been handed down since 1756, when the university received its original grant from the king of England.

The recent popularity of the bungalow has brought with it a rejuvenation of the Old New England fireplace.

Perhaps some merchants may believe it impossible to make an attractive display of so prosaic a subject as andirons and fireplace goods, but M. E. Klasky has proved quite the contrary to be the case.

The accompanying illustrated

particularly inspiring about a group of fireplace goods in themselves.

The trick, then, lies in the mode and manner of display and arrangement. A person's own innate artistic sense generally can be relied upon to guide him in this feature of the work.

The cloth is a green velvet.

Enter Winter Sporting Goods Displays in AMERICAN ARTISAN Window Display Competition.

It required but a glimpse to take in the situation. That sounds as if the great Sherlock Holmes had ap-

Could anything be more simple than to use this means of calling attention to your silverware and china dishes?

This and hundreds of similar ideas could be easily worked into clever sales window displays.

The winter sporting season will give you many additional opportunities to make prize-winning window displays.

The AMERICAN ARTISAN AND HARDWARE RECORD window display competition closes January 12, 1924, and we, like the great and historic British Admiral, expect every re-

tailer and clerk to submit what he considers his best display.

You can't lose.

Rules Governing Contest.

The photograph, together with descriptions of how the window displays were arranged and the materials used, may be sent by mail or express, charges prepaid, and must reach this office not later than January 12, 1924.

Each photograph and description must be signed by a fictitious name or device and the same name or device must be placed within a sealed envelope containing the real name and address of the contestant. This sealed envelope is to be enclosed with the photograph. Contestants may enter as many window displays as they desire.

AMERICAN ARTISAN AND HARDWARE RECORD reserves the right to publish all photographs and descriptions submitted in this competition.

A competition committee of three will be appointed, one of whom will be an expert window dresser and one an experienced hardware man. This committee will pass upon the merits of all photographs and descriptions received, without knowing the names or addresses of the senders, and will decide the winners of the contest.

United States Sends Much Hardware to Spain.

According to United States Department of Commerce Reports for December 3, 1923, a considerable quantity of hardware is imported by Spain. In this the United States looms higher than in most other commodities, as it furnishes saws, files, tools, machinery, drills, hinges, locks, scales, coffee grinders, corn shellers, small threshers, screws, safety razors, and many minor articles. From Germany comes aluminum ware, cutlery, steel, tools, axes, thermos bottles, toys, and machinery. England sends iron pipe, steel, shovels, coffee grinders, and crockery, while forks, locks, wrought steel, hinges, and cheap tools are imported from France. From Austria comes enameled ware

and from Czechoslovakia some china is imported.

Why the Hardware Store Did Not Make the Sale

The conductor of a street car was talking to the passenger who sat next to his station and the conversation drifted toward department store business. The conductor remarked that sometimes these stores sell things close but they more than make it up on other things. He said, "A short time ago one of the department stores asked me to open a charge account and I did, and it was 'so easy to buy.' After making one or two purchases in the department store and charging them I happened to go into the hardware department and there saw an inverted gas light and I purchased one for \$2.50. I had seen a similar one in a hard-

ware store in my neighborhood in a show window, but there was no price tag on it. When the department store article was delivered to the house and I looked it over I thought that \$2.50 was a pretty good price and the next time I went by the local hardware store I went in and asked the price and found out it was 89 cents for the same article."

He was asked, "Why did you not go to the hardware store first?"

His reply was, "In the first place they did not put a price on the article and you know we fellows of moderate means are a little bit bashful about asking prices on things even though we may want them, whereas if you are going around in a department store everything of that nature has a price tag on it."

The moral is obvious.

Turnover Is Best Proof of Your Ability as a Hardware Buyer and Salesman.

One More Turn of Stock Often Means an Increase in Net Profits of Over One Hundred Per Cent.

MUCH has been said and much has been written about turnover and profits, but there are still many who figure that if their average stock is \$20,000 and they sell \$60,000 their turnover is three, when as a matter of fact it is only a small fraction over two, if indeed that high.

The following article by K. G. Pearce, Field Secretary of the "Pasha" organization, has many points of good information on the relation of turnover to profits:

Many dealers make the mistake of dividing their sales by their inventory taken at cost prices to arrive at their true turnover. This is a mistake. Turnover can only be figured by dividing the amount of yearly sales by the amount of the average inventory taken at selling prices, or divide the amount of yearly sales at cost by the amount of the inventory taken at cost prices.

You cannot arrive at your true turnover by dividing the sales by

cost, or visa versa. You must reduce both to selling price or both to costs.

How to Determine Your Average Inventory.

Example:

Inventory December 31st	
at selling prices.....	\$14,400.00
Goods added to stock	
January at selling	
price	7,500.00

Stock total	\$21,900.00
Sales, January	8,434.44

Estimated stock on hand	
February 1st, at selling	
price	\$13,462.00
Goods added to stock,	
February	9,000.00

Stock total	\$22,461.00
Sales, February	9,094.00

Estimated stock on hand	
March 1st, at selling	
price	\$13,367.00

This is repeated every month throughout the year and on December 31st, when your actual inventory is taken add this to your total and divide by 13. This will give you your average inventory.

Divide your yearly sales by your average inventory at selling price and you will have your correct turnover.

Notice How Turnover Increases Profits.

In making up this example, we are assuming this hardware man's expense is 22 per cent, and that in marking up his goods, he has figured on a 30 per cent margin or gross profit.

Example:

Average inventory at selling prices	\$10,000.00
Sales for year	30,000.00
Divide your \$30,000.00 sales by your \$10,000.00 inventory, and it gives you three (3) turnovers.	
Sales	\$30,000.00
Gross profit or mark-up, per cent.....	.30
	<hr/>
	\$ 9,000.00

Operating expenses for the year	\$ 6,600.00
Net profit	2,400.00

Three turnovers then gives a profit of \$2,400.00 per year. Now see the result of making four turnovers on this same inventory.

Average inventory at selling price	\$10,000.00
Turnovers	4

Sales for the year.....	\$40,000.00
Gross profit, per cent..	.30
	<hr/>
	\$12,000.00

Operating expense or overhead for year	6,600.00
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Net profit\$ 5,400.00

Does It Pay to Increase Your Turnover? Do You Know Your Cost of Doing Business?

I have asked a good many hundred hardware dealers what they figure it costs them to do business and found their answers ranging from 8 per cent to 50 per cent. This is a great variance, as men in

the same sized towns, in the same line of business, should have practically the same cost of doing business. The difference then comes in the figuring of what really makes up the cost of doing business. Here is a list of the items which enter into the cost of doing business and should be charged to your expense:

1. Interest on the next amount of your total investment—that is, money invested in stock and fixtures.

2. Rental on all real estate or buildings owned by you and used in your business at an equal rate to that which you would receive if renting or leasing to others; if you rent you will charge all rentals to expense.

3. Salaries. This expense will include all salaries paid to employees, also a salary for yourself equal to that which you would command were you in the employ of another and holding the same position. You should also treat in a like manner all members of your family who may be employed in your business.

4. Depreciation on all goods which you carry over and upon which you have to make a mark-down because of change in style, damage or for any other reason. This will also include concessions in price to patrons given special quotations on large purchases. The depreciation here will be the difference between your regular retail price and the amount you receive.

5. Depreciation on fixtures, tools, delivery equipment or anything else suffering from age or wear and tear.

6. Donations and subscriptions given to churches, lodges, etc.

7. All fixed expenses, such as taxes, insurance, water, light, fuel, etc.

8. Incidental expenses, such as drayage, postage, office supplies, delivery or expense of horse and wagon, telephones, telegrams, advertising, canvassing, etc.

9. Collection expenses.

10. Losses, goods stolen, bad accounts, etc.

Your expense sheet should be divided into salaries, supplies, postage, advertising, light and heat, delivery, telephone, collections, rents, repairs, insurance, interest, donations, taxes and any other items connected with your business. If every business man would charge the items I have just mentioned and divide his expenses into such classifications, he then would be in a position to know the exact cost of doing business. The itemized expense sheet is very important, as the cost of doing business will sooner or later reflect seriously on your profit and loss statement at the end of the year. You cannot intelligently mark your goods without knowing the exact cost of doing business.

Cost Which Public Must Bear.

The following discourse on the "Sanctity of Contracts" is made by J. H. Tregoe, Secretary-Treasurer of the National Association of Credit Men:

"Within four decades it was customary for the traveling salesman to do no more than show samples of his wares. The merchant would go to the market twice a year or so for the purpose of laying out his lines and getting ready for the seasonal business. This was the rule when our business was not more than one-fourth of its present volume, and it was possible for manufacturers and wholesalers to provide in a brief period what the retail merchant would need each season. With the expansion of our commerce this condition had to change. else manufacturers and wholesalers would be unable to provide for the seasonal needs of the retail merchant. Goods must be ordered in advance, in some lines months in advance, so that a sufficient period can be given the manufacturer and the wholesaler to provide for estimated requirements. The risk of so doing should be shared by the retail merchant.

"In our complex commerce it is important that sales contracts be faithfully adhered to. If in apprehension of lower prices or dimin-

ished consumption the seller willfully and without the consent of the buyer cancels orders or suspends their execution indefinitely, a real hurt has been done to the whole body of business, even though the one transaction is infinitesimal when proportioned to our entire commerce.

"To keep the courses of business even, to keep men and capital properly employed, there must be a reasonable division of the risk and the responsibility of the buyer is just as strong as that of the seller in maintaining a fair division. The seller must hold the sales contract inviolate; if the upward trend in prices may develop a larger consumption, he must live true to the sale and execute the order just as faithfully as though conditions had remained neutral or prices were moving downward.

"The relation of the buyer and seller, debtor and creditor, is delicate, and the integrity of the relation is in proportion to the fine sense of honor which dominates its execution.

"It is difficult to get this doctrine into the hearts of business men, but we must work persistently until the whole of America's business is based on the utmost integrity and honor.

"Aside from the moral effect, the material effects must be considered, for no forced cancellation occurs or any evasion of the credit contract that does not entail a cost on someone which the public must eventually bear."

Continental Company, Detroit, Withdraws Prices on White Pine Screen Doors.

The Continental Company, Detroit, Michigan, have withdrawn all prices on White Pine Screen Doors, effective December 18, 1923, as follows:

We have just sent the following letter to all jobbers handling White Pine Screen Doors:

"We hereby withdraw all prices on White Pine Screen Doors, effective December 18th.

"In the meantime we will accept

at present prices your definite specifications for shipment in distribution cars or for your stock, with definite shipping date; orders not subject to cancellation. New prices will be quoted on application after December 18th."

Hardware an Important Export from United States to India— Kitchen Utensil Exports Increase.

Hardware constitutes one of the most valuable classes of manufactured goods on the Indian market from the United States, reports Vice Consul Harold Shantz from Calcutta, according to *Commerce Reports*. In 1922 the total value of American hardware (excluding cutlery and electroplated ware) imported into India amounted to \$2,255,743, or about twice the amount imported in 1913. Great Britain, however, has consistently maintained the lead in the total value of hardware imported by India, having supplied \$7,865,863 worth in 1922—a slight increase over the last pre-war year and approximately one-half of the value of the British hardware imported in 1920.

The most valuable class of merchandise listed under hardware in the Indian customs returns consists of implements and tools (other than agricultural implements and machine tools). Next to this in value are metal lamps, of which 2,776,963 were imported in 1922. It is believed that metal lamps constitute a large proportion of the hardware imports from America, as American brands are known throughout India, and the trade name of one is almost synonymous with the word "lantern" among many of the Indian population. However, one of the leading British manufacturers of metal lamps is reported to have recently transferred his Indian business to a company registered in Calcutta, which will not only develop a widespread organization for imported lamps, but this company is also expected to manufacture lamps in India.

Other important classes of hardware imports are builders' hard-

ware and enameled ironware, in all of which German products are found in increasing quantities. In this connection it is noted that British makers are erecting works at Jamhadpur for a company known as Enameled Ironware (Ltd.). An output of ten tons per week is contemplated when this plant is completed, to consist mainly of rice bowls and tumblers.

Dominican Market for Kitchen Utensils.

During 1921 and 1922 kitchen utensils of Dutch and British manufacture gained control of the Dominican market. In 1921 imports of this class from the United States were valued at \$9,743 out of a total of \$41,352; the importations from Netherlands for the same year were valued at \$15,508 and from Great Britain at \$10,750. In 1922 (a year of acutely subnormal imports) the total value of imports was but \$14,935, of which the Netherlands furnished \$10,911, the United States \$2,433, and Great Britain \$1,568. No fault is found with American manufactured goods of this class, but all merchants claim they can obtain equally satisfactory goods from the Netherlands and Great Britain at lower prices, and therefore confine their orders for American goods to those needed at once, freight traffic with European ports being very unsatisfactory. (Consul Charles Bridgham Hosmer, Santo Domingo, September 12.)

Did You Ever Use a Grab Box for Odds and Ends?

Collect odds and ends around your store like screws, nails, screw-hooks and a thousand and one things, put them in shoe boxes, together with one key in each box. Boxes are sold in sort of a grab game, 10 cents each, full value of merchandise in each box, although some of it may be old.

Put a padlock and chain on various articles around the store, such as step-ladders, clothes baskets, oil stoves and even on a range. Be careful in your announcement not to say that every key will unlock

some padlock, but that there are some keys in the total number of grab boxes that will unlock them all.

It makes the customer go around from article to article and thus see everything in the store. Scatter these padlocked articles all around the store. It might be well to put duplicates of these chained articles in the show window with a show card announcement.

The hardware man who tried it out said it was a huge success. Many old shelf warmers were moved to new homes, although disposed of at a loss. In addition, many sales were made on regular stock. Try it!

Paints for the Little Odd Jobs Are Usually Bought by Women.

The department stores, which count so many women among their customers, keep a special department of paints for interior work and furniture almost exclusively for feminine trade, and that counter is not the least profitable, nor is it a bargain counter. Such goods as the housewife needs having a fixed value, at which they may be bought anywhere else, and being procurable in various sized packages to suit the immediate requirements of the customer, there seems no earthly reason why prices should be cut even to meet the innate feminine craving for bargains.

Don't be afraid of making suggestions for the betterment of the business. If heard from it is a sign that you are using your eyes and ears to advantage.

Coming Conventions

Western Retail Implement and Hardware Association, Missouri Theater Building, Kansas City, January 15, 16, 17, 1924. H. J. Hodge, Secretary-Treasurer, Abilene, Kansas.

The West Virginia Retail Hardware Association Convention and Exhibit, Huntington, West Virginia, January 15 to 18, 1924. James B. Carson, Secretary-Treasurer, 1001 Schwind Building, Dayton, Ohio.

Mountain States Hardware and Implement Association Convention, City Auditorium, Denver, Colorado, January 22-24, 1924. W. W. McAlister, Secretary-Treasurer, Boulder, Colorado.

Kentucky Hardware and Implement

Association, Louisville, January 22-25, 1924. J. M. Stone, Secretary-Treasurer, 202 Republic Building, Louisville.

Sheet Metal Contractors' Association of Indiana, Hotel Severin, Indianapolis, January 29 and 30. Leslie W. Beach, Richmond, Indiana, is Secretary.

Indiana Retail Hardware Association, Inc., Convention and Exhibition, Cadle Tabernacle, January 29, 30, 31, February 1, 1924. G. F. Sheely, Secretary, Argos.

Illinois Retail Hardware Association, Hotel Sherman, Chicago, Illinois, February 18 and 19, 1924. Leon D. Nish, Secretary-Treasurer, Elgin, Illinois.

Nebraska Retail Hardware Association, Lincoln, Nebraska, February 5 to 8, 1924. George H. Dietz, Lincoln Nebraska, Secretary-Treasurer.

Wisconsin Retail Hardware Association Convention and Exhibition, Milwaukee Auditorium, February 6, 7, 8, 1924. George W. Kornely, Manager of Exhibits, 1476 Green Bay Avenue, Milwaukee. P. J. Jacobs, Secretary-Treasurer, Stevens Point.

Michigan Retail Hardware Convention and Exhibition, Grand Rapids, February 12, 13, 14, 1924. Karl S. Judson, Exhibit Manager, 248 Morris Avenue, Grand Rapids. A. J. Scott, Secretary, Marine City, Michigan.

Iowa Retail Hardware Association, Des Moines, Iowa, February 12, 13, 14 and 15, 1924. A. R. Sale, Secretary-Treasurer, Mason City, Iowa.

The Pennsylvania and Atlantic Seaboard Hardware Association, Incorporated, Convention and Exhibition at the Philadelphia Commercial Museum, Philadelphia, Pennsylvania, February 12, 13, 14 and 15, 1924. Sharon E. Jones, Secretary-Treasurer, Wesley Building, Philadelphia.

Ohio Hardware Association, Convention and Exhibition, Cincinnati, Ohio, February 19, 20, 21 and 22, 1924. James B. Carson, Secretary, 1001 Schwind Building, Dayton, Ohio.

New York Retail Hardware Association Convention and Exhibition, February 19, 20, 21, 22, 1924. Headquarters, McAlpin Hotel, and exhibition at Seventy-first Regiment Armory. John B. Foley, Secretary, 412-413 City Bank Building, Syracuse, New York.

New England Hardware Dealers' Association Convention and Exhibition, Mechanics' Building, Boston, February 20, 21, 22, 1924. George A. Field, Secretary, 10 High Street, Boston, Massachusetts.

North Dakota Retail Hardware Association Convention and Exhibition, Municipal Auditorium, Fargo, February 20, 21, 22, 1924. C. N. Barnes, Secretary, Grand Forks.

Michigan Sheet Metal and Roofing Contractors' Association, February 25 to 28, 1924. Hotel Kerns, Lansing. T. E. Ederle, Secretary, 1121 Franklin Street, S. E., Grand Rapids, Michigan.

Missouri Retail Hardware Association Convention and Exhibition, Marquette Hotel, St. Louis, February 26, 27 and 28, 1924. F. X. Becherer, Secretary, 5106 North Broadway, St. Louis.

Minnesota Retail Hardware Association Convention and Exposition, St. Paul Auditorium, February 26, 27, 28, 1924. C. H. Casey, Secretary, Jordan, Minnesota.

California Retail Hardware Implement Association Convention and Exhibition, Civic Auditorium, San Francisco, March 18, 19, 20, 21, 22, 1924. LeRoy Smith, Treasurer, 112 Market Street, San Francisco.

Southeastern Retail Hardware and Implement Association, composed of Alabama, Florida, Georgia and Tennessee, Convention and Exhibition, Atlanta, Georgia, May 27, 28, 29, 1924. Walter Harlan, Secretary, 701 Grand Theater Building, Atlanta.

Hardware Association of the Carolinas Convention, Wrightsville Beach, North Carolina, June 17, 18, 19, 1924. T. W. Dixon, Secretary-Treasurer, 717-718 Commercial Bank Building, Charlotte, North Carolina.

South Dakota Retail Hardware Association and Exposition, Coliseum Building, Sioux Falls, March 4, 5, 6, 7, 1924. C. H. Casey, Secretary, Jordan, Minnesota.

Retail Hardware Doings

California.

The Pomona Hardware Company, formerly the George and Harris Hardware Company, has opened for business at Pomona. The new owners are J. F. Rambo and C. W. Heald.

Illinois.

Dr. W. A. Walker and his brother, Walter P. Walker, of Marion, have purchased the Williamson and Joiner Hardware store in Golconda, and will operate it under the name of Walker Brothers Hardware Company. Arnold and Henry Sass have rented a part of the A. W. Meyer store building at Barrington where they plan to open a hardware store soon after the first of the year.

Indiana.

The Buss Hardware store, located in the Moorhous Building on South Main Street, Monticello, has opened for business.

J. E. McCray has traded his farm for the Waitt Hardware Store at Sheridan.

Iowa.

At Boone, fire caused \$10,000 loss to the Cray Hardware Company.

The Mack and Voigt Hardware Company has been opened for business at 726 Second Street, Fort Madison.

Kansas.

A deal has been completed whereby Clarence Quigley and William Watson, have purchased the hardware stock of Funk and Jamison at Great Bend.

Michigan.

Fred M. Hecox has purchased the interest of his partner, Walter Scott, in the Hecox-Scott Hardware Company, at Ontonagon.

Missouri.

J. M. Wallace of Nevada, has purchased the Coburn hardware stock at Rich Hill.

Nebraska.

A deal has been completed whereby Sires and Casteel have sold their hardware business at Norfolk to George and Saloun of Orchard.

Tennessee.

The Stratton Hardware Company, Lebanon, which was burned to the ground, has again entered business. It is located in the building now occupied by the Lebanon Battery and Tire Company on North Cumberland Street.

Washington.

W. D. Harris and his son, D. S. Harris, have opened a hardware store in Fern-dale.

Stove Salesmen of Pennsylvania Celebrate Their Twenty-sixth Anniversary with Banquet.

More Than Twenty New Members Gained During Administration of President William G. Withers.

THE twenty-sixth annual Banquet and Reception of the Pennsylvania Stove Salesmen Association was held at the Hotel Walton, Philadelphia, Wednesday evening, December 19th.

It surely was good to see such a large attendance comprising for the most part the old standpatters—who have not missed an affair in the past twenty-six years—and here's hoping that they will attend many more events.

The afternoon was devoted to indoor sports and it was a jolly gathering. The oldtimers would get together and talk over old times, and it is for this very reason that they attend every meeting, especially the Annual Banquets. It is not what they hope to get out of the Association, but for the good fellowship that has developed into an esteemed friendship that never will be forgotten.

Announcement was made about 7:00 P. M. o'clock that Banquet Hall was ready. It was an unusually good dinner that awaited the members and guests.

The programme of entertainment that was arranged was of the highest class and was thoroughly enjoyed.

Charles H. Grakelow and his aide de camp J. Lafferty (now on the staff of the Mayor-elect, Honorable W. Freeland Kendrick) were among the speakers, and not only entertained but gave good advice to business men.

Our old friend Dr. Davis is a born orator and his discourse was a work of art. Ben Gleichman, with his Southern stories went over big—he's some story teller.

A treat of the evening was had when Bill Habicht announced that Miss E. Black (daughter of Jim Black) would entertain with some character songs. Miss Black is a very talented young lady and Jim,

needless to say, is proud of her. Miss Black was presented with a bouquet of flowers by the entertainment committee. Her songs were selected and their execution was beautiful.

Retiring President William G. Withers requested Harvey J. Fueler to act as toastmaster and he did so very capably. All in all the evening was a round of pleasure and it is good to look forward each year to

Gaw, upon whom a great deal of responsibility rests, was re-elected Secretary, but there are hopes that some day a young member will take over this responsible position.

Under the directorship of President William G. Withers, a gain of over twenty members made, and it is hoped that 1924 will bring many new additions.

The three members who were responsible for the inception of this association, William G. Withers, Walter T. Hallowell and William F. Habicht, are still in the running and it is hoped that they will enjoy many, many years of active membership.



Secretary James McGaw.

seeing the members of the Stove Salesmen Association.

It is regretted to learn that two members, John McConville and W. Barto, have gone to the great beyond during the past year. They will always be respected and remembered.

For the coming year Andrew L. Rivel was elected President. He is one of the younger members and his ideas are for the development and enlarging of the association. He was promised the support of the entire membership.

Joseph Evans was elected Treasurer and no man is better fitted.

That busy little man Jimmie Mc-

The banquet concluded with a two-reel movie of the latest Buster Keaton. It kept all the boys laughing and sent them home happy.

Special Demonstration Pushes Copper-Clad Ranges.

Today capacity in the output of refined copper is two-thirds greater than it was in 1913, and the metal is selling at a price 4 cents per pound less than the average for the last 20 years. The amount produced in the month of October was at the rate of 2,700,000,000 pounds refined annually. Imagine this stream of

metal swelling into a vast river, flowing toward the refineries and from there filtering out through thousands of estuaries, some large, some small, in the form of manu-

facturing; the only possible way that it could be created.

Without advertising, who would know of the advantages of a Copper-Clad range; in fact, who would

Daily Citizen is a typical example of educational advertising that is directly responsible for the increase in the output of raw products.

In reading a stove advertisement that stresses the Copper-Clad feature of the range, the first question which enters the reader's mind is, "why is this range any better than others?" The question is answered briefly but forcefully and adequately.

The headline is very good.

The illustrations and free offer are also good.

The advertisement was 9 x 15 inches.

A suggested improvement would be that the illustrations show some sort of action that would favorably impress the readers.

Why Business Men Must Take Active Part in Politics.

Taxes must ultimately be passed along to the customer. That fact is the hardest thing in the world for the consumer to understand—or rather he perversely insists on misunderstanding it. So leadership in legislation affecting these things is of real importance to business interests.

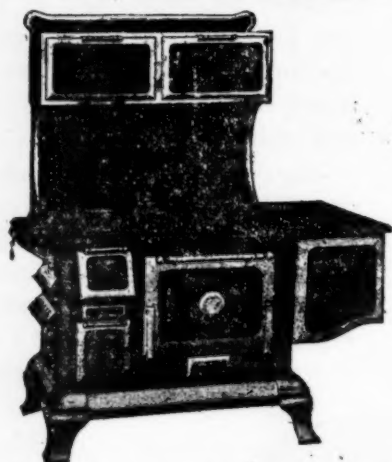
Meyers Company, Kokomo, Offers Hot Blast Heaters.

The accompanying reprinted advertisement was taken from the *Kokomo, Indiana, Tribune*, and it occupied a space 6 x 7 inches.

The illustration and headline are well related to the subject, both cooperate to draw attention to the subject in question and to the O. M. Myers Company. Headline could have been improved by shortening it somewhat. "Inspect our heating stoves," would be better.

A good use of white space has been made, and the selection of type sizes is also carried out in accordance with good practice, except the type just below the heading, which should not have been made all caps.

The price quotations are perhaps somewhat indefinite, and this could be remedied by quoting a definite

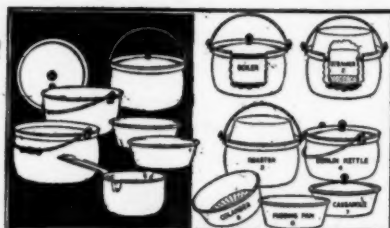


SEE!! ASBESTOS SWEAT

Know why the pure sheet copper lining makes the Copper-Clad superior to any other range. See the Copper-Clad Crank heat a section of a range body and then see the beads of sweat on the iron body. Right before your eyes you see just what happens every time you build a fire in your range. You see why the Copper-Clad uses the sheet of pure copper, and what it does and how it does it. You take nobody's word. You see! You know it!

Copper-Clad Demonstration at our store entire week of September 10th

This beautiful
set of
aluminum
ware **FREE**



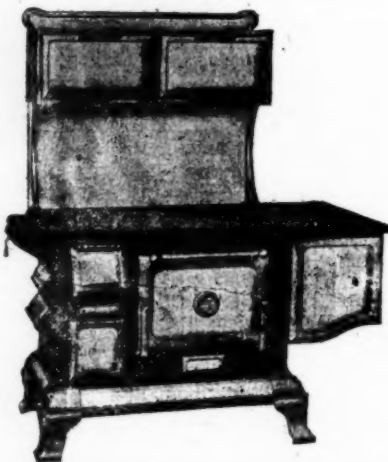
Buy your
COPPER-CLAD
at this sale

"Free" means that this ware does not cost Copper-Clad buyers one cent. It is a reward for buying while the Copper-Clad Crank is here and is offered by him as an additional inducement to attend this sale. This ware is very substantial and just the kind that you would select if buying for your own use. The 7-in-1 convertible cooker takes the place of seven different vessels, as shown by figures 1, 2, 3, 4, 5, 6 and 7. You will find some use for this utensil every day.

You know how the many walls and air spaces of a thermos bottle hold the heat. You know that a house with a single wall is not as warm as a house with two walls and an air space.

Then you can appreciate the fuel-saving feature of the Copper-Clad body made up of four walls and an air space. Come and have this wonderful, Copper-Clad feature explained. See and know why the Copper-Clad is best.

NEW FURNISHING CO.
"Everything for the Home"



Type of Educational Advertising That Creates Interest and Ultimately Sales.

factured products, and thence to the ultimate consumer.

You say that new developments have increased the use of copper and other metals. True! indeed. But how was the increased demand created? By proper and continuous

believe there was any possible connection between the increased production of refined copper and increased economy in a Copper-Clad range?

The accompanying advertisement reprinted from the *Linton, Indiana,*

Associating Good Things to Eat with Lorain-Equipped Gas Range.

*Keynote of American Stove Company Advertising
Sounded with Well-Cooked Food Shown in Ad.*

PROFESSOR E. A. STEWART, of the University of Minnesota, says he is a firm believer in the method of teaching which provides for a thorough grounding in the fundamentals of any course of study before attempting to proceed deeper into the subject.

Professor Stewart is himself en-

gaged in educational (publicity) work; he is, therefore, in a peculiarly advantageous position to test methods of developing the human mind which produce the best results.

The *Saturday Evening Post* for December 8, 1923, carried an advertisement of the American Stove Company, designed to depict in a

price on a particular stove each time the ad appeared.

The space between the paragraphs is not too wide, and the ad itself is

immediate action. Then, too, the fact that there would be no extra charge for pipe should have been emphasized more. Here is some-

Our Heating Stoves Ready For Inspection

NEW WONDER HOT BLASTS
COLES HOT BLASTS
INDIAN HOT BLASTS
IDEAL HOT BLASTS

Hot Blast Heaters ranging in price from \$32.50 to \$75.00, with no extra charge for pipe to set them up.

Terms \$1.00 to \$2.00 a week. Discount for cash.

Don't place your order elsewhere before you have seen our splendid line and learned something about heating stove values.



O'Malley & Co.
ESTABLISHED IN 1901 COMPLETE HOME FURNISHERS

208 WEST WALNUT STREET

Stove Advertisement Which Is Attractive and Easy to Read.

easy to read; there is no action shown in the illustration, which is not difficult to remedy.

The amount of discount should have been stated, as this would have been an additional inducement for

thing given away free—tell the reader so in definite terms!

Tell them about heating stove values in the ad, then they won't need to go elsewhere, but come in and buy.

clear, forceful way an idea of the wide range of accomplishment of the Lorain-equipped Gas Range, but for the retail stove merchant there is a far more profitable lesson to be learned from this advertisement. Here is an excellent graphic description of how the stove and its product can be so permanently associated with one another as to fix solidly in the mind of the prospective customer the idea that well-cooked food is only obtainable where proper control of temperatures is effected.

The upper left-hand corner of the page was occupied by a Lorain-equipped range.

To the right and down the side were placed jars of canned fruit, pastry of many kinds, roasts and hams.

Beside each group was placed, enclosed in a circle, the red wheel.

In the extreme lower right-hand corner was placed the coupon carrying the names of the American Stove Company and its six divisions.

The remainder of the sheet was occupied by explanatory reading matter.

Embellish this advertisement with the natural colors of good things to eat made possible with the Lorain-equipped Gas Range and you have about as perfect an example of association of ideas as it is possible to produce, while at the same time it is also the perfection of simplicity.

The American Stove Company has some new and exceedingly clever advertising arrangements for use by Lorain Agents in their local newspaper advertising.

It is not the part of true progressiveness to hold lightly those tried forms, institutions and philosophies that experience has proved the most whether in politics, ethics or business. It is the sincere desire of AMERICAN ARTISAN AND HARDWARE RECORD to further in every way possible the cordial inter-relationship between itself, its advertisers and subscribers. It is only by constructive effort that we can progress.

Advertising Is Teaching in a Real Sense—Make Yours Do Its Work Properly.

Weir & Cowley, Ligonier, Indiana, Advertise Unique Readjustment Sale Which Moves Goods Rapidly.

IN ANSWER to the appeal from our Ad-Critique Bureau for specimen advertisements, the Bureau has received a circular used by Weir & Cowley, Ligonier, Indiana, to promote a special stock reduction sale. The sale ran for eight days, from November 17 to 24.

The circular was 25x35 inches over all and both sides were used.

The reason given for the stock reduction sale was the readjustment made necessary by the death of B. W. Cowley, and this fact was announced at the head of the circular in large type.

Due to its great size, it has been impossible for us to reproduce the entire circular, but in order to give our readers an appreciation of it, we have removed one section, originally 6¼x8½ inches, and reproduced it herewith.

Our readers will note from this small section that each department of the store had its own little offering. These sections were segregated from one another by rules, as shown by the section reproduced herewith.

The main headline on the side offering hardware represented a

billboard upon which the sign painter had just completed painting the words "Stock Reduction Sale" in large letters. The painter himself was just finishing the final "e."

The offer of an "Extra Special" 42-piece dinner set for \$9.50 appeared in the center of the circular.

TELL US YOUR ADVERTISING STORY



What do you consider your best advertisement? What specific features of it made it pull? What effect did it have upon your sales? Was that effect immediate or gradual?

Our readers are interested in your Advertising Story. Tell your brother retailer in other towns what made your advertisement a success through the Ad-Critique Bureau of AMERICAN ARTISAN AND HARDWARE RECORD. Send in sample ads for publication and ask for advice on form letters, circulars and newspaper advertising. Let us serve you!

Thrifty Housewives will Appreciate these savings in House Ware

	50c Mirrors sale price 34c		25c Thermometers sale price 19c	
\$1.25 Clothes Hampers 98c	\$1.00 Clothes Baskets 69c	\$2.00 Family Scales \$1.69	Good Coal Hods 45c	95c Galvanized Tubs 69c
	40c Corn Poppers 33c	10c Can Openers 7c	10c Cake Turners 7c	 a chill chaser 6.75 Oil Heaters 5.72

At these prices every Housewife can afford White Enamel Ware

	35 and 40c Pudding Pans for 26c	
75c Wash Basins 63c	\$1.00 6-quart Preserving Kettles 69c	1.75 Com- binet 1.47
	65c 2½-qt Sauce Pans 48c	

All items offered during the sale were plainly priced and well illustrated, as will be seen in the section reproduced herewith.

Two free offers were mentioned. With each oil cook stove sold during the sale a 5-gallon can filled with high-grade kerosene was given away free. With every Florence Hot Blast Heater sold during the sale 1,000 pounds of coal was given away free.

It is needless to say that the sale was a huge success.

* * *

The store that advertises consistently is the store which people patronize, because the advertisement directs their attention to the things they ought to have. Let a customer depend upon the reliable advertisement to keep him up-to-date and you will find him among the first to adopt the newest labor-saving device.

Activity Centered on Meeting Holiday Demands; Senate Deadlocked Over Commerce Commission Chairman.

Non-Ferrous Metal Markets Unsettled—Copper Dull—Tin Quiet—Zinc Weakens Still More.

THE immediate outstanding feature confronting business is the tax reduction issue. Will the Mellon tax reduction plan be carried out or will it be so mutilated as to be unrecognizable? The passage of a soldier's bonus bill is also an important issue pending. The Senate is still deadlocked over the election of a Chairman of Interstate Commerce Commission and there is little likelihood that this "battle" will be ended until after the holidays.

The financial structure continues on a sound basis, and optimism prevails in the business world.

Copper.

Business in copper is dull at home and abroad. Approaching holidays and unsettled political conditions at home and abroad have a restricting influence upon trade.

At the same time there is no pressure to sell copper by either first or second hands.

On the other hand consumers generally show no anxiety to buy. Producers are not seeking business for shipment beyond March and most of them are confining sales to January and February.

Consumers apparently have requirements well covered for the next thirty to sixty days, but not much copper has been purchased for second quarter.

Producers continue to take small orders for Electrolytic for early shipment, that is, for December, January and February delivery, at 13.12½ cents delivered, but are generally asking 13.25 cents for March shipment. Sales at 13.12½ cents delivered for nearby shipment are not confined to custom smelters.

Tin.

The tin market is firm but quiet, with prices about ¾ cents higher than last week.

The New York market is quiet

with a steady undertone and prices are ¼ cent to ⅜ cents a pound higher. At the first call on the New York Metal Exchange 46.87½ cents December 19 was bid for all deliveries with offers ranging from 47.15 cents to 47.50 cents. Later in the day some sales were made of both prompts and futures at 46.87½ cents.

On the afternoon call on the Metal Exchange 47.12½ cents was bid for January delivery and 47.00 cents bid for all other positions, with offerings ranging from 47.25 cents to 47.50 cents. Trading has chiefly been between dealers, consumers not showing much interest at the higher prices.

Lead.

The lead market conditions remain unchanged—a dearth of offerings of any sort—little new demand—the American Smelting & Refining Company's price still at 7.25 cents New York—and a wide range in the nominal market quotations. The situation is strong but quiet.

The outside market is already so far above the "official" contract price that operators are not bidding actively, content to do nothing on either side for the present.

The St. Louis quotations for prompt, December and January are 7.50 to 7.75 cents; February, 7.25 to 7.50 cents.

Zinc.

The evident desire to move zinc stocks has further weakened the prompt shipment price to 6.17½ cents East St. Louis basis for Prime Western. January is offered at 6.20 cents and later months are nominal at 2½ points higher per month, but producers are not seeking future business at what they regard as a depressed level.

Domestic consumers, however,

are not actively in the market for either spot or futures.

Solder.

Chicago warehouse prices on solder are as follows: Warranted, 50-50, \$29.50; Commercial, 45-45, \$28.75, and Plumbers', \$27.50, all per 100 pounds.

Wire and Nails.

Producers of wire products are greatly encouraged at the outlook and report the receipt of more single carload business in mixed and straight cars, and some 60-day contracts.

Much of this single carload business can go forward immediately since it is not expected to arrive until after inventories, but the business is so widespread that low stocks generally is indicated and on that account business is expected to be good in wire and nails at least for first quarter.

Some fencing is being placed although the return has been disappointing since the inauguration of the guarantee against price decline.

Bolts and Nuts.

Makers of bolts and nuts at Chicago generally continue to strengthen their position. Specifications the past week have been heavier and bookings for the first quarter somewhat larger. All prices are firm on the new basis and the outlook is the brightest in some time. One mill is operating full. This improvement is in spite of the fact that implement makers are taking less than 30 per cent of their normal needs.

Tin Plate.

Production of tin and terne plate in the United States in the first 11 months of this year was approximately equal to the previous record for a calendar year, made in 1917. This comparison by itself would suggest an increase of about 8 per

cent in the rate, and our estimate of the present year's production would also show about 8 per cent increase. Necessarily the estimate is only approximate, and the amount of the probable error cannot be guessed precisely. This much may be regarded as certain, that this year's production, when officially reported next Spring or Summer, will prove to show a gain over the 1917 record of about half-way between 5 per cent and 10 per cent.

The tin plate market in general is rather quiet, as the business has already been done. Actual bookings of orders, however, are running fairly large as some business, previously merely outlined, is being written into actual order form. Mills could probably sell considerably more tin plate than they are selling if they made any effort. They have no particular desire to sell, however, as the possible output of the first half of the new year is regarded as certain to be taken up, no matter when the remaining sales are made. The great bulk is already sold.

The market is very firm at \$5.50.

Sheets.

The past few days have brought a further increase in the volume of sheet buying and a further firming up in prices. The two are directly and closely related, but it cannot be said that either one is the cause and the other simply the effect. They go together. A mill with an improved rolling program is less disposed to cut prices, while a buyer confronted with less price shading than formerly is more disposed to buy at such concessions as he can still secure, or more ready to buy at full prices if he is unwilling to change his mill connection.

As noted in previous reports, shading in black sheets recently narrowed down to \$2.00 a ton in both black and galvanized, rarely exceeding this amount, and even the amount of cutting by \$2.00 has been diminishing in the past week.

The market is quotable at 3.75 cents to 3.85 cents on black sheets and 4.90 cents to 5.00 cents on gal-

vanized sheets, but it would seem that now the emphasis should be placed on the higher price rather than on the lower.

As to the blue annealed, the shading from 3.00 cents has not amounted to much, and 3.00 cents may be quoted as the regular market.

Old Metals.

Wholesale quotations in the Chicago district, which should be con-

sidered as nominal, are as follows: Old steel axles, \$17.00 to \$18.00; old iron axles, \$25.00 to \$25.50; steel springs, \$19.00 to \$19.50; No. 1 wrought iron, \$15.00 to \$15.50; No. 1 cast, \$18.50 to \$19.50, all per net tons. Prices for non-ferrous metals are quoted as follows, per pounds: Light copper, 9½ cents; light brass, 6 cents; lead, 4¾ cents; zinc, 4 cents, and cast aluminum, 15 cents.

Heavy Pig Iron Use Expected; Producers Confident of Ability to Maintain Present Operations.

Sales in Birmingham Equal Output—Large Rail Bookings Made in Chicago Territory.

"FUTURE buying of steel has gone forward this week," the Iron Trade says. "The increased amount of tonnage called for by individual buyers indicates heavy consumption is anticipated. Producers feel more sanguine over their ability to maintain present operations through the first quarter of 1924. Rail bookings in Chicago and western territory have been brought up to 750,000 tons."

The United States Steel Corporation is operating around 76 per cent of capacity, while the independents are working at 62 per cent, a decline of 1 per cent in both cases from a week ago. But the steel corporation has increased ingot production slightly to above 84 per cent, while the independents have dropped down to about 63½ per cent. Blast furnace activities are slightly lower, averaging around 65 per cent.

December bookings of steel at Chicago will exceed November by a wide margin on the western market, according to estimates of leading producers in this territory. Specification against current contracts are also showing a gain although operations are being held at about the same scale, 75 to 80%.

The leading western producer has 19 of 27 blast furnaces active and is operating at about 75% of capacity. The leading independent is producing at all the way from 70 to 80%.

The general outlook in the industry is bright, producers say and prospects for 1924 are equally as good as they were a year ago at this time. The present pressure for delivery on standard steel rail contracts is so heavy that a leading western maker is finding it impossible to meet all of the demands.

Western mills figured in two important awards made by railroads during the last week. The leading interest booked 20,000 kegs of spikes of the total of about 75,000 kegs awarded by the New York Central. Another Chicago maker was awarded a small tonnage of this order.

Sales of pig iron in the Birmingham district this month will equal the make. Inclination to advance \$1.00 per ton is reported as to quotations and firm belief is that \$22.00 will be asked for No. 2 foundry, by the end of the year.

Iron sold this month was between \$20.00 to \$21.00, but large lots sold at \$18.00.

One of the larger melters of iron in the south is said to be in the market again. Inventory time will last but a few days and then iron will begin moving again.

Furnace interests are desirous of getting delivery as quickly as possible. Surplus stock in this district is coming down steadily and not more than 80,000 tons will be on the yards, it is believed, by January 1st.

Terne Plate Specialists

Since the beginning of the industry in this country.

Write for samples.



Our Brands

shown here ranging from 40 to 8 pound have proven their unusual lasting qualities by years of actual service.

A LARGE stock of all brands always carried in stock for immediate shipment. Also manufacturers of "Osborn Quality" Gutter and Conductor, 28 gauge being our standard

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Quality & Beauty IN ART METAL CEILINGS AND SIDE WALLS

QUALITY—only first quality material is used in making FRIEDLEY-VOSHARDT ART METAL CEILINGS AND SIDE WALLS.

BEAUTY—is necessary for the complete and lasting satisfaction of your customers.

Having one of the finest equipped sheet metal plants in the country and employing only skilled workers enables us to serve you with **QUALITY** goods having the **BEST DESIGNS**.

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Current Hardware and Metal Prices.

AMERICAN ARTISAN AND HARDWARE RECORD is the only publication containing Western Hardware and Metal prices corrected weekly.

METALS

PIG IRON.	
Chicago Foundry..	23 00 to 23 50
Southern Fdy. No.	
2	26 01 to 27 01
Lake Sup. Char-	29 04
coal	
Malleable	23 00 to 23 50

FIRST QUALITY BRIGHT TIN PLATES.	
	Per Box
IC 14x20 112 sheets	\$12 45
IX 14x20	14 05
IXX 14x20 56 sheets	17 57
IXXX 14x20	18 12
IXXXX 14x20	18 65
IC 20x28 112 sheets	27 50
IX 20x28	29 85
IXX 20x28 56 sheets	16 15
IXXX 20x28	17 20
IXXXX 20x28	18 25

TERNE PLATES.	
	Per Box
IC 20x28, 40-lb. 112 sheets	\$25 60
IX 20x28, 40-lb. "	28 50
IC 20x28, 30-lb. "	21 80
IX 20x28, 30-lb. "	24 70
IC 20x28, 25-lb. "	20 80
IX 20x28, 25-lb. "	23 70
IC 20x28, 20-lb. "	18 80
IX 20x28, 20-lb. "	21 15
IC 20x28, 15-lb. "	17 05
IX 20x28, 15-lb. "	15 75
IC 20x28, 8-lb. "	14 05

COKE PLATES.	
Cokes, 80 lbs., base, 20x28.	\$13 85
Cokes, 90 lbs., base, 20x28.	14 10
Cokes, 100 lbs., base, 20x28.	14 45
Cokes, 107 lbs., base, IC	
20x28	14 85
Cokes, 135 lbs., base, IX	
20x28	17 40
Cokes, 155 lbs., base, 56	
sheets	9 75
Cokes, 175 lbs., base, 56	
sheets	10 65
Cokes, 195 lbs., base, 56	
sheets	11 70
BLUE ANNEALED SHEETS.	
Base	per 100 lbs. \$3 50

ONE PASS COLD ROLLED BLACK.	
No. 18-20	per 100 lbs. \$4 50
No. 22-24	per 100 lbs. 4 55
No. 26	per 100 lbs. 4 60
No. 27	per 100 lbs. 4 65
No. 28	per 100 lbs. 4 70
No. 29	per 100 lbs. 4 75

GALVANIZED.	
No. 16	per 100 lbs. \$5 10
No. 18-20	per 100 lbs. 5 25
No. 22-24	per 100 lbs. 5 40
No. 26	per 100 lbs. 5 55
No. 27	per 100 lbs. 5 70
No. 28	per 100 lbs. 5 85
No. 30	per 100 lbs. 6 35

BAR SOLDER.	
50-50	per 100 lbs. 29 50
Commercial.	
45-55	per 100 lbs. 28 75
Plumbers	per 100 lbs. 27 50

ZINC.	
In Slabs	6 50
SHEET ZINC.	
Cask lots, stock, 100 lbs.	11 00
Less than cask lots, 100 lbs.	11 50

BRASS.	
Sheets, Chicago base	19% c
Mill Base	17% c
Tubing, brazed, base	25% c
Wire, base	18% c

COPPER.	
Sheets, Chicago base	20% c
Mill base	20c
Tubing, seamless, base	24c
Wire, No. 9 & 10 B. & S. Ga.	
.....	17% c
Wire, No. 11, B. & S. Ga.	17% c

LEAD.	
American Pig	3 45
Bar	9 50
Sheet.	
Full Coils	per 100 lbs. 10 75
Cut Coils	per 100 lbs. 11 75

TIN.	
Pig Tin	per 100 lbs. 49% c
Bar Tin	per 100 lbs. 50% c

HARDWARE, SHEET METAL SUPPLIES, WARM AIR HEATER FITTINGS AND ACCES- SORIES.

ADZES.	
Coopers'	Net
Barton's	Net
White's	Net

AMMUNITION.	
Shells, Loaded, Peters.	
Loaded with Black Powder 18%	
Loaded with Smokeless	
Powder	18%
Winchester.	
Smokeless Repeater	
Grade	20 & 4%
Smokeless Leader	
Grade	20 & 4%
Black Powder	20 & 4%
U. M. C.	
Nitro Club	20 & 4%
Arrow	20 & 4%
New Club	20 & 4%
Gun Wads—per 1000.	
Winchester 7-8 gauge 10&7% 1/2	
" 9-10 gauge 10&7% 1/2	
" 11-28 gauge 10&7% 1/2	

ASBESTOS.	
Paper up to 1/16	6c per lb.
Rollboard	6 1/2 c per lb.
Millboard 3/32 to 3/16	6c per lb.
Corrugated Paper (250	
sq. ft. to roll)	\$6.00 per roll

AUGERS.	
Boring Machine	40&10%
Carpenter's Nut	50%
Hollow.	
Stearns, No. 4, doz.	\$11 50
Post Hole.	
Iwan's Post Hole and Well 35%	
Vaughan's, 4 to 9 in.	\$15 60

AXES.	
First Quality, Single	
Bitted (unhandled, 3 to	
4 lb., per doz.	\$14 00
Good Quality, Single	
Bitted, same weight, per	
doz.	13 00

BARS, CROW.	
Steel, 4 ft., 10 lb.	\$ 80
Steel, 5 ft., 18 lb.	1 40
Pinch bars.	
5 1/2 ft., 24 lb.	1 60

BARS, WRECKING.	
V. & B. No. 12	\$0 34
V. & B. No. 24	0 43
V. & B. No. 32 1/2	0 57
V. & B. No. 30	0 48
V. & B. No. 350	0 63

BITS.	
All Vaughan and Bushnell.	
Screw Driver, No. 30, each	\$ 27
Screw Driver, No. 1, each	16
Reamer, No. 30, each ..	41
Reamer, No. 100 each ..	41
Countersink, No. 13, each.	20
Countersink, Nos. 14-15 each	27

BLADES, SAW.	
Wood.	
Atkins 30-in.	
Nos.	6 40 26
	\$8 90 \$9 45 \$5 40

BLOCKS.	
Wooden	45%
Patent	45%

BLOW TORCHES (See Firepots).

BOARDS.	
Stove.	
Cy. stal, 23"	Per Doz. 23 90

Wash.	
No. 760, Banner Globe	
(single)	per doz. \$5 25
No. 652, Banner Globe	
(single)	per doz. 6 75
No. 801, Brass King.	
.....	per doz. 8 25
No. 860, Single—Plain	
Pump	6 25

BOLTS.	
Carriage, Machine, etc.	
Carriage, cut thread, 1/2 x 6	
and sizes smaller and	
shorter	50%
Carriage sizes, larger and	
smaller and shorter	50-10%
Machine, 1/2 x 4 and sizes	
smaller and shorter	50-5%
Machine, sizes larger and	
longer than 1/2 x 4	50-10-5%
Stove	70-10%

BRACES, RATCHET.	
V. & B. No. 444 3 in.	\$4 54
V. & B. No. 222 3 in.	3 39
V. & B. No. 111 3 in.	3 55
V. & B. No. 11 3 in.	3 02

BRUSHES.	
Hot Air Pipe Cleaning.	
Bristle, with handle, each	\$0 85
Flue Cleaning.	
Steel Only, each	\$1 25

BURRS.	
Copper Burrs only	40%

BUTTS.	
Steel, antique copper or dull	
brass finish—case lots—	
3 1/2 x 3 1/2—per dozen pairs	\$3 48
4 x 4	4 74

Heavy Bevel steel inside	
sets, case lots—	
..... per dozen sets	\$ 00
Steel bit keyed front door	
sets, each	2 00
Wrought brass bit keyed	
front door sets, each ..	4 00
Cylinder front door sets,	
each	8 50

CEMENT, FURNACE.	
American Seal, 5 lb. cans, net	\$ 45
" 10 lb. cans, "	50
" 25 lb. cans, "	2 00
Asbestos, 5 lb. cans	45
Pecora	per 100 lbs. 7 51

CHAINS.	
Sher. Steel Safety Chain.	
500-ft. coil, per ft.02
100 to 500 ft., per ft.03 1/2
Less than 100 ft., per ft.03
Iron Jack Chain.	
Box (12 yds.)45

CHIMNEY TOPS.	
Iwan's Complete Rev. &	
Vent.	30%
Iwan's Iron Mountain only.	35%
Standard	30 to 40%

CHISELS.	
Cold.	
V. & B. No. 25, 1/4 in., each	\$0 26
V. & B. No. 25, 1/2 in., each	41
Diamond Point.	
V. & B. No. 55, 1/4 in.	0 31
V. & B. No. 55, 1/2 in.	0 48

FIRMER BEVELLED	
Round Nose.	
V. & B. No. 65, 1/4 in.	0 29
V. & B. No. 65, 1/2 in.	0 40
Socket Firmer.	
Cape.	
V. & B. No. 50, 1/4 in.	0 31
V. & B. No. 50, 1/2 in.	0 57

CHUCKS, DRILL.	
Goodell's, for Goodell's Screw	
Drivers	List less 35-40%
Yankee, for Yankee Screw	
Drivers	\$6 00

CLAMPS.	
Adjustable.	
No. 100, Door (Stearns)	
doz.	\$22 00
Carpenters'.	
Steel Bar	List price plus 20%

HOSE.	
Sherman's brass, 1/2-inch	
per doz.	\$0 48
Double, brass, 1/2-inch, per	
doz.	1 20

CLINKER TONGS	
Front Rank, each	\$1 75
Per doz.	1 85

CLIPS.	
Damper.	
Acme, with tail pieces,	
per doz.	\$1 31
Non Rivet tail pieces,	
per doz.	31

COPPERS—Soldering.	
Painted Roofing.	
3 lb. and heavier	per lb. 40c
2 1/2 lb.	" 40c
2 lb.	" 40c
1 1/2 lb.	" 40c
1 lb.	" 60c

CORD.	
No. 7 Std. per doz. banks.	\$11 00
No. 8	12 50

CORNICE BRAKES.	
Chicago Steel Bending.	
Nos. 1 to 6 B.	10%

COUPLINGS, HOSE.	
Brass	per doz. \$3 31

CUT-OFFS	
Kuehn's Korrekt Kutoffs:	
Galv., plain, round or cor. rd	
Standard gauge	40%
26 gauge	10%

DAMPERS.	
"Yankee" Hot Air.	
7 inch, each 20c, doz.	\$1 71
8 " " 25c, "	2 40
9 " " 30c, "	2 75
10 " " 32c, "	3 00

Smoke Pipe.	
7 inch, each	\$ 31
8 " "	40
9 " "	45
10 " "	48
12 " "	50

Reversible Check.	
8 inch, each	\$1 50
9 " "	1 70

DIGGERS.	
Post Hole.	
Iwan's Split Handle	
(Eureka)	
4-ft. Handle	per doz. \$14 00
7-ft. Handle	per doz. 36 00
Iwan's Hercules pattern,	
per doz.	14 90

DRILLS.	
V. & B. Star, 12-inch Length.	
3/4, 5/16 and 1/2, each	\$ 21
1, each	26
1 1/2, each	34
2, each	41
V. & B. Star, 18-inch Length.	
5/16 and 1/2, each	\$ 23
3/4, each	45
1, each	53
1 1/2, each	1 03

EAVES TROUGH.	
Milcor	
Galv. Crimpedge, crated ..	75%

ELBOWS—Conductor Pipe.	
Milcor	
Galv., plain or corrugated,	
round flat	65%
Crimp, Std. gauge	40%
26 Gauge	10%

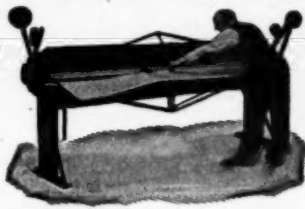
Square Corrugated.	
Milcor	
Standard gauge	45%
26 gauge	30%
Portico Elbows.	
Standard Gauge Conductor Pipe.	
plain or corrugated.	
Not nested	70 & 5%
Nested solid	70 & 5%

ELBOWS—Stave Pipe.	
1-piece Corrugated. Uniform.	Doz.
5-inch	\$1 40
6-inch	1 60
7-inch	3 10
Special Corrugated.	
Doz.	
6-inch	\$1 45
7-inch	1 75

NEW CHICAGO ROTARY SLITTING SHEAR

Used in Connection with a Cornice Brake

Guaranteed
to Cut
24-Gauge
Iron



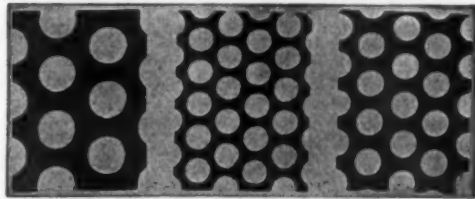
Will Split
a Sheet
or
Cut Strips
at
Any Angle

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All Sizes and Shapes of Holes
In Steel, Zinc, Brass, Copper, Tinplate, etc.
For All Screening, Ventilating and Draining
EVERYTHING IN PERFORATED METAL

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Perfect, fine finish
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WROUGHT
STAR EARS**

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in gross
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bulk to
suit the
purchaser

We can
furnish sizes
20, 30 & 40
stamped
from sheet
brass.

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Write today for our catalog which illustrates our complete line of ears

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229 to 237 ARCH STREET
WAREROOMS AND FACTORY: 100 to 114 BREAD STREET
PHILADELPHIA, PA.

Steel Ceilings Side Walls and Cornices

Only first quality material used
Many neat designs of character.

Write today for our complete cata-
log giving descriptions and prices.

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CONTINUOUS EXHAUST

BECAUSE of their scientific design Arex Ven-
tilators exert a powerful siphonage action at
all times. They have no moving parts, are storm-
proof rigid, light, strong and easily installed.
Large sales with more profits are yours with Arex.
Write for catalog, prices and discounts.

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THE ORIGINAL SIPHONAGE VENTILATOR

CORTRIGHT METAL SHINGLES

Cut out of tin-plate, stamped into shape and then
dipped separately in molten zinc.

The dipping or coating operation coming after the shingles have been cut
and formed means that this coating on

Cortright Hand Dipped Shingles

has not been cracked or broken in any stamping operation. Also that
there is a coating on all edges as well as sides.

If you are not familiar with Cortright Metal
Shingles we will be glad to send literature.



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THE MOST IN PRICE AND SERVICE ÆOLUS VENTILATORS

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**"THE
STANDARD"**
VENTILATOR and CHIMNEY CAP

DOES away with high stacks, swings freely in the
slightest breeze and positively cures down-drafts. The
strongest and most efficient combination to be had. Has
no equal for chimney purposes. All jobbers sell them—
write your jobber or us for prices and catalog today.

Manufactured by

STANDARD VENTILATOR CO.
LEWISBURG, PA.



Uniform, Collar Adjustable.	
4-inch	Doz. \$3 00
5-inch	Doz. 3 10
7-inch	Doz. 3 60

WOOD FACES—50% off list.

FENCE.	
Field Fence	60%
Lawn	53%

FILES AND RASPS.

Heller's (American)	65-5%
American	65-5%
Archie	60 & 10%
Black Diamond	60-5%
Eagle	60-10%
Great Western	60 & 10%
Kearney & Foot	60 & 10%
McClellan	60 & 10%
Nicholson	60-14%
Simonds	60%

FIRE POTS.

Ashton Mfg. Co.	
Complete line	
Firepots and Torches	52%

Otto Bernz Co.	
No. 1 Furn. Gasoline with large shield, 1 gal.	\$ 6 75
No. 3 Furn. Kerosene, 1 gal.	15 12
No. 10 Brazier, Kerosene or Gasoline, 10 gals.	47 52
No. 5 Torch, Gasoline or Kerosene, 1 pt.	7 92
No. 35 Torch, Gasoline, 1 quart	5 40
No. 36 Torch, Gasoline, 1 pt.	4 05

Clayton & Lambert's.	
East of west boundary line of Province of Manitoba, Canada, No. Dakota, So. Dakota, Nebraska, Kansas, Oklahoma, Arizona, San Angelo and Laredo, Texas	62%
West of above boundary line	48%

Geo. W. Dienes Mfg. Co.	
No. 02 Gasoline Torch, 1 qt.	\$ 5 55
No. 0250, Kerosene or Gasoline Torch, 1 qt.	7 50
No. 10 Tinnern's Furn.	12 60
No. 15 Tinnern's Furn.	12 00
Round tank, 1 gal.	12 00
No. 21 Gas Soldering Furnace	3 60
No. 110 Automatic Gas Soldering Furnace	10 50

Double Blast Mfg. Co.	
Gasoline, Nos. 25 and 35	60%

Quick Meal Stove Co.	
Vesuvius, F.O.B. St. Louis	30%
(Extra Disc. for large quantities)	

Chas. A. Hones, Inc.	
Buzzer No. 1	\$ 9 00
" " 2	12 00
" " 22	13 50
" " 42	15 00
" " 43	19 00

FREEZERS—ICE CREAM.

Peerless and Alaska	
1 quart	\$2 95
2 quart	3 45
3 quart	4 10

White Mountain	
1 quart	\$3 50
1 quart	4 90
2 quart	5 70

GALVANIZED WARE.

Pails (Competition), 8 qt.	\$1 85
10-qt.	2 10
12-qt.	2 30
14-qt.	2 57

Wash tubs, No. 1	\$6 25
No. 2	7 00
No. 3	8 25

GARAGE DOOR HARDWARE.	
Stanley	All net

GAUGES.

Marking, Mortise, etc.	Nets
Wire	
Disston's	25%

CHISELS.

Discount	65% and 10%
----------	-------------

GLASS.

Single Strength, A and B.	all sizes 83 & 85%
Double Strength, A, all sizes	84%

GREASE, AXLE.

Fraser's	
1-lb. tins, 36 to case.	per case \$ 4 75
3-lb. tins, 24 to case.	per case 7 80
5-lb. tins, 12 to case.	per case 7 20
10-lb. tins, per dozen	19 40
15-lb. tins, per dozen	19 80
25-lb. tins, per dozen	19 80

HAMMERS, HANDLED.

All V. and B.	
Blacksmiths' Hand, No. 6, 26-oz.	Each, net \$1 00
Engineers' No. 1, 26-oz.	1 00
Farrier's, No. 7, 7-oz.	93
Machinists', No. 1, 7-oz.	78

Nail.	
Vanadium, No. 41, 20-oz.	each 1 59
Vanadium, No. 41 1/2, 16-oz.	each 1 59
V. & B., No. 11 1/2, 16-oz.	each 1 01
Garden City, No. 11 1/2, 16-oz., each	75
Tinner's Riveting, No. 1, 8-oz., each	79
Shoe, Steel, No. 1, 18-oz., each	65
Tack.	
Magnetic	
No. 5, 4-oz., each	81

HAMMERS, HEAVY.

Farrier's, No. 10, 10-oz.	\$1 01
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HANDLES.

Axe.	
Hickory, No. 1	per doz. 4 00
Hickory, No. 2	" 3 00
1st quality, second growth	6 00
Special white, 2nd growth	6 00

Chisel.	
Hickory, Tanged, Firmer	
Assorted	per doz. 55c
Hickory, Socket, Firmer	
Assorted	per doz. 70c
File	per doz. \$1 20

Hammer and Hatchet.	
No. 1 per doz.	\$0 90
Second growth hickory, per doz.	1 50

Soldering.	
Per doz.	\$2 40

HANGERS.

Conductor Pipe.	
Milcor Perfection Wire	25%

Eaves Trough.	
Steel hangers	30%
Triple Twist wire	10%
Milcor Eclipse Wire	20%
Milcor Triplex Wire	15%
Milcor Milwaukee Extension	15%
Milcor Steel (galv. after forming) List plus	12 1/2%
Milcor Selflock E. T. Wire, List plus	40%

HASPS.

Hinge, Wrought, with staples, Net	
-----------------------------------	--

HATCHETS.

V. and B. Supersteel.	
Broad, No. 1, 24-oz.	\$1 43
Half, No. 1, 15-oz.	1 25
Half, No. 3, 27-oz.	1 37
Claw, No. 1, 19-oz.	1 31
Flooring, No. 1, 20-oz.	1 43
Shingling, No. 1, 17-oz.	1 30
Lathing, No. 1, 14-oz.	1 20
Lathing, No. 2, 17-oz.	1 25

Vanadium Steel.	
Half, No. 62, 22-oz.	\$1 32
Underhill Pattern Lathing, 9 row, 19-oz.	2 29

HINGES.

Heavy Strap, in Bundles.	
4 inch, dozen prs.	\$1 12
5 " " " "	1 57
6 " " " "	1 93
8 " " " "	3 21

Extra Heavy T in Bundles.	
4 inch, dozen prs.	\$1 74
5 " " " "	1 85
6 " " " "	2 31
8 " " " "	3 97

HOES.

Garden	Net
--------	-----

HOOKS.

Box.	
V. and B. No. 9, each	\$0 25

Conductor.	
Milcor	
"Direct Drive" Wrought Iron for wood or brick	15%

Cotton.	
V. and B. No. 3, each	24

Hay.	
V. and B. No. 1, each	26

Bar Meat.

V. and B. No. 26, 3/4".	each 09
V. and B. No. 24, 1/2".	each 16

Screw Meat.

V. and B. No. 3, per gro.	6 50
---------------------------	------

Butchers' "B."	
V. and B. No. 6, each	03
V. and B. No. 8, each	11

HOSE.

Per Ft.	
1/2-in. 3 ply molded	3/4c to 12 1/2c
1/2-in. cord	3/4c to 10c
1/2-in. wrapped	13 1/2c

HUMIDIFIERS.

"Front-Blank," Automatic.	
In single lots	50%
In lots of 10 or more	50-55%
In lots of 35 or more	50-10%
Vapor pans, etc., each	50%

IRONS.

Sad.	
Genuine Mrs. Potts, nickel plated, per set	\$1 55
Asbestos No. 70, per set	3 10
Asbestos No. 100, per set	2 30

E. C. Stearns.	
No. OA Corner, doz. sets	\$2 50
No. OB " " "	2 75

KNIVES.

Butcher.	
Beechwood Handles, 6-inch blade	25%
Beechwood Handles, 7-inch blade	25%
Beechwood Handles, 8-inch blade	25%
Cooper's Hoop	25%

Drawing.	
Standard	25%
Adjustable	25%
Barton's Carpenters'	25%

Hay.	
Iwan's Solid Socket	25%
Heath's	25%
Iwan's Sickle Edge	25%
Iwan's Imp'd Serrated	25%

Hedge.	
Challenge	25%
Disston's No. 1	25%

Patty.	
Common	25%
Lander's	25%

Scraping.	
Beech Handles	25%
Lander's	25%

KNOBS.

Door.	
Mineral	per doz. \$2 00
Porcelain	2 00
Jet	2 00

LADDERS.

Step.	
Common, per ft.	28c
Common, with Shelf, add 10c	
IXL	34c
Challenge, 6 to 9 ft.	55c
10 to 16 ft.	60c
Kant-Break, per lineal ft.	75c

LANTERNS.

Per doz.	
Monarch tin, hot blast	\$ 3 25
Diets No. 2, cold blast	13 00
Best tubular	8 25
Competition lanterns No. 0	
tubular	6 90

LAWN MOWERS.

12-inch	\$5 20
16-inch	5 85

Ball Bearing.	
4 blade, adjustable bearing.	
14"	\$7 50
16"	7 80

LEATHER BELTING.

From No. 1 Oak Tanned Butts.	
Extra heavy, 18-oz.	35%
Heavy, 16-oz.	40%
Medium, 14 1/2-oz.	40%
Light, 13-oz.	50%

LEATHER LACING.

Cut, strictly No. 1	45%
---------------------	-----

LEVELS.

Disston, No. 28 Asst.	\$22 00
" No. 18, 20 in., each	1 80
" No. 22, 24 in., each	3 40
" Shafting, 6 in.	10 30
" " 4 in. gr. glass	24 30
" No. 1 Asst.	5 75
" No. 2 Asst.	13 40
" 24-26 in., each	1 00
" 28-30 in., each	1 00

LIFTERS.

Stove Cover.	
Coppered	per gro. \$4 00
Alaska	" 4 75

LOCKS.

Barn Door.	
No. 60 Stearns	per doz. \$11 00
No. 80 " "	20 00

MALLET.

Carpenters.	
Fibre Head No. 2, per doz.	\$12 00
" No. 3, " "	15 00
" No. 3 1/2, " "	20 00

Round Hickory	
per doz.	\$3 00—5 00

Tinnern's.	
Hickory	per doz. \$2 25

MATS.

Door.	
National Rigid	5 & 10 & 5%
Acme Steel Flexible	50%

MITRES.

Galvanized steel mitres, and caps, end pieces, outlets	30%
Milcor	
Galv. one piece stamped	40%

MOPS.

Cotton, Star (Cut Ends).	
Pounds 12' 15' 18' 24'-3-oz	
Per doz. \$4 00 4 35 5 50 7 00	
Enterprise	16 1/2%
Parker	50 & 5%

NAILS.

Cut Steel	\$4 70
Cut Iron	4 70
Wire.	
Common	3 80
Cement Coated	3 40

NETTING, POULTRY.

Galvanized before weaving	45-10%
Galvanized after weaving	45%

NIPPERS.

Nail Cutting.	
V. & B. No. 30	75c

Double Duty.	
V. & B. No. 60	75c

Hoof.	
Heller's	40 & 10%
V. & B. No. 62, each	\$2 25

NOZZLES.

Hose.	
Magic	per doz. \$3 50
Diamond	" 5 75

OILERS.

Chase Pattern.	
Brass and Copper	10%
Zinc Plated	40 & 5%

Railroad.	
Brass	20 & 5%
Coppered	50 & 5%

Steel.	
Copper Plated	70 & 5%

OPENERS.

Delmonico	
per doz.	\$1 20
Never Slip	" 65

Crane.	
V. & B.	per doz. \$7 25—11 00



REQUIRES ONLY HEAT

CHICAGO SOLDER COMPANY
4201 Wrightwood Ave., CHICAGO, ILL.

OTTO BERNZ CO., INC.

extend to you their cordial

Greetings

and wish you and yours a

Merry Christmas

and a

Happy and Prosperous New Year

**Exchange your 1918
War Savings Stamps
for 4% Treasury
Savings Certificates
at your Bank or
Post Office Now.**



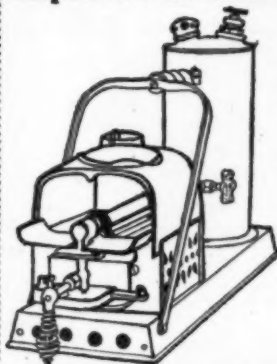
No. 208 Torch
Ask for Latest Price

CUT YOUR TORCH OPERATING COSTS

Torch efficiency will save time and fuel which adds to your profits. No. 208 Improved Double Needle Torch has powerful Burner, producing over 300 degrees more heat, which burns the lower grade fuels perfectly. Gas orifice is cleared by using the upper Needle, lower controls flame. Both are blunt, not sharp pointed, making it impossible to ruin Burner by enlarging the gas orifice. No. 208 will outlast two ordinary Torches. Jobbers supply at factory prices. Send for a catalogue.

CLAYTON & LAMBERT MFG. CO.
10635 Knodell Ave., DETROIT, MICH., U.S.A.

Improved Models of Soldering Furnaces



Have you seen the improved models? The greatest line of Soldering Furnaces today on the market. They should be. There is more experience behind them. Forty-eight years of it! The Gems were popular before the majority or present day furnaces were heard of. It is the oldest, the recognized standard Soldering Furnace today.

Look these models over. Each ends its class. Line them up and take your choice.

Do you want a Catalog?

**BURGESS SOLDERING
FURNACE CO.**

Improved No. 3 Gem with Pump Department A COLUMBUS, OHIO

Hundreds
Installed in
Six U. S. Navy
Yards and
Arsenals.

Best by Test of Thirteen Years
Over 20,000 in use

*Simplist Construction, Fewest Parts, Easiest
Operated and Changed. Made in 4 sizes.*

No. 2 Punch—Capacity 5/16 thru 1/4 Iron. Length 23 inches.

Only Portable Channel Iron Punch on Market. Capacity 1/4 thru 1/2 Iron. Punches to center of 4 inch Channel Iron, with 1 1/4 inch flanges.

All parts interchangeable with No. 2 Punch. No. 3 Tinner's Punch—Capacity 1/4 thru 1/2 gauge.

No. 1 Punch—Capacity 1/8 thru 1/4 Iron.

Ask your Jobber,
or write us.

W. A. Whitney Mfg. Co., Rockford, Ill.

C. G. HUSSEY & CO.

Rolling Mills and Office, PITTSBURGH, PA.

Manufacturers of

SHEET COPPER, BOTTOMS, ROLL COPPER, TINNED AND
POLISHED COPPER, NAILS, SPIKES, RIVETS, CONDUCTOR
PIPE, EAVES TROUGH, ELBOWS, SHOES, MITRES, ETC.

Branch Warehouses in New York, Chicago and St. Louis

Plecker's Galvanized Eave Trough and Corrugated Expanding Conductors

Made of
Keystone
Copper Bearing
Steel



Cost no more
Lasts longer
Therefore
Cheapest

CLARK-SMITH HARDWARE CO. - - PEORIA, ILLINOIS

FAILS.	
Cream.	
14-qt. without gauge.	per doz. \$9 50
18-qt. without gauge.	per doz. 11 00
30-qt. without gauge.	per doz. 11 75

Sap.	
10-qt., IC Tin	per doz. \$4 00
12- " "	5 50

Stock.	
Galv. qts. 14 16 18 20	
Per doz. \$9 75 10 75 12 75 14 50	

Water.	
Galvanized qts. 10 12 14	
Per doz. \$5 75 6 50 7 25	

PASTE	
Asbestos Dry Paste:	
200-lb. barrel	\$15 00
100-lb. barrel	8 00
35-lb. pail	3 25
10-lb. bag	1 00
5-lb. bag	55
2 1/2-lb. cartons	30

PINCERS.	
All V. & B.	
Carpenters', cast steel.	
No. 6 8 10 12	
Each \$0 43 \$0 52 \$0 61 \$0 71	
Blacksmiths', No. 10.....	\$0 61

PIPE.	
Conductor.	
"Interlock" Galvanized.	
Crated and nested (all gauges)	60-20%
Crated and not nested (all gauges)	60-15%
Square Corrugated A and B and Octagon.	
29 Gauge	60-10%
28 " "	60-10%
26 " "	60-10%
34 " "	60-10%

"Interlock."	
Crated and nested (all gauges)	60-20%
Prices for Galvanized Toncan Metal, Genuine O. H. Iron, Lyonmore Metal and Keystone C. B. on application.	

Stove.	Per 100 joints.
26 gauge, 5 inch E. C.	
nested	\$17 00
26 gauge, 6 inch E. C.	
nested	18 00
26 gauge, 7 inch E. C.	
nested	19 00
28 gauge, 5 inch E. C.	
nested	15 00
28 gauge, 6 inch E. C.	
nested	16 00
28 gauge, 7 inch E. C.	
nested	18 00
30 gauge, 5 inch E. C.	
nested	13 00
30 gauge, 6 inch E. C.	
nested	14 00
30 gauge, 7 inch E. C.	
nested	16 00
T-Joint Made up.	
6-inch..... per 100	\$40 00

Furnace Pipe.	
Double Wall Pipe and Fittings	33 1/2%
Single Wt. Pipe, Round Pipe Fittings	33 1/2%
Galvanized and Back Iron Pipe, Shoes, etc.	33 1/2%
Milcor Galvanized	40%

PLANES.	
Stanley Iron Bench.....	Net

PLIERS.	
(V. & B.)	
Nut, No. 3, each	\$2 50
" No. 5, each	64
" No. 25, each	69
Gas, No. 7, each	55
" No. 8, each	61
" No. 12, each	87
Lining or Crimping.	
No. 35, each	64
Button's Pattern.	
No. 5 each	61
No. 8 each	74
Double Duty, No. 105	50

POINTS, GLAZIERS'.	
No. 1, 2 and 3...per doz. pkgs.	65c

POKERS, STOVE.	
Wrt Steel, str't or bent.	per doz. \$0 75
Nickel Plated, coil handles	" 1 10

POKERS, FURNACE.	
Each	\$0 50

PULLEYS.	
Furnace Tackle.....per doz.	\$0 60
Per gross	6 00
" Screw (en-cased)	per doz. \$0 85

Ventilating Register.	
Per gross	\$9 00
Small, per pair	0 30
Large, per pair	0 50

PUNCHES.	
Machine.	Each.
V. & B., No. 11-13, 1 1/2 x 6	\$0 19
V. & B., No. 20, 1 1/2 x 9	27
V. & B., No. 10, 1 1/2 x 10	29
V. & B., No. 1-6, 1 1/2 x 6	12

Center.	
V. & B., No. 50, 1 1/2 x 4	\$0 14

Belt.	
V. & B., No. 101-103	\$0 24
V. & B., No. 108-109	33
V. & B., No. 25, ass't.	3 80

Samson Line.	
No. 1 Hand	Doz. lots or less 40%
No. 2 Hand	3 doz. lots Less 40 & 5%
No. 4 Hand	6 doz. lots or more...Less 50%
No. 3 Bench	Less than doz. lots...Less 25%
	Doz. lots or more...Less 40%

Extra Punches and Dies for Samson:	
No. 1 Hand	Less than doz. lots...Less 25%
No. 2 Hand	Doz. lots Less 33 1/2%
No. 4 Hand	3 doz. lots, Less 40%
No. 3 Bench	6 doz. lots or more, Less 40 & 10%

PUTTY.	
Commercial Putty, 100-lb. kits	\$3 55

QUADRANTS.	
Malleable Iron Damper.....	10%

FLOOR REGISTERS AND BORDERS.	
------------------------------	--

Cast Iron	20%
Steel and Semi-Steel	33 1/2%
Baseboard	33 1/2%
Adjustable Ceiling Ventilators	33 1/2%

Register Faces—Cast and Steel	
Japanned, Bronzed and Plated, 4x6 to 14x14	33 1/2%
Large Register Faces—Cast, 14x14 to 38x42	60%
Large Register Faces—Steel, 14x14 to 38x42	65%

ROOFING.	
Per Square	
Best grade, slate surf. prep'd	\$1 85
Best talc surfaced	2 20
Medium talc surfaced	1 50
Light talc surfaced	95
Red Rosin Sheeting, per ton	\$72 00

ROPE.	
Cotton.	
Steel.	
1st Quality, base	13 1/2c
No. 2	12 1/2c
Manilla.	
1st Quality standard brands	15 1/2c
No. 2	14 1/2c
Hardware Grade, per lb.	12 1/2c

SAWS.	
Butchers'.	
Atkins No. 2, 14-in.	\$12 75
" No. 2, 18-in.	14 30
" No. 7, 16-in.	15 85
" No. 2, 22-in.	15 92
" No. 7, 20-in.	18 05
" No. 7, 24-in.	20 20
" No. 7, 28-in.	22 35

Compass.	
Atkins No. 2, 10-in.	\$ 5 45
" No. 10, 10-in.	5 60
" Blades, No. 2, 10-in.	3 25
" " No. 2, 10-in.	3 30

Cross-Cut.	
Atkins No. 221, 4 ft.	\$3 03
" No. 221, 6-ft.	4 45
" No. 221, 8-ft.	6 07

Hand.	
Copper Burrs only	30%
" No. 96, 20-in.	21 70

Hand and Rip.	
Atkins No. 54, 20-in.	\$19 50
" No. 54, 26-in.	24 40
" No. 53, 16-in.	18 10
" No. 53, 20-in.	22 90
" No. 53, 24-in.	26 60
" No. 53, 28-in.	31 45
" No. 53, 30-in.	34 15

Keyhole.	
Atkins No. 1, complete	\$3 10
" No. 2, complete	3 70

Miter Box.	
Atkins No. 1, 4x20	\$32 65
" No. 1, 5x22	38 00
" No. 1, 6x22	42 20

Pruning.	
Atkins No. 20, 12-in.	\$ 8 45
" No. 10, 16-in.	18 15

Wood.	
Atkins No. 202	\$ 7 19
" No. 318	8 75
" No. 906	15 50
" No. 1509	16 56

SCRAPERS.	
Box.	
No. 6, six blades each	25c
Hog.	
No. 6, each	25c
Floor (Stearns).	
No. 10, each	\$11 50

SCREEN DOOR HINGES.	
Cast Iron	gross \$13 00
Steel	" 9 50

SCREWS.	
Wood.	
F. H. Bright	30%
R. H. Blued	78%
F. H. Jap'd	74%
F. H. Brass	76%
R. H. Brass	74%

Sheet Metal.	
No. 7, 1/2 x 1/4, per gross	\$0 55
No. 10, 1/2 x 3/16, per gross	75
No. 14, 1/2 x 1/4, per gross	90

SCREW DRIVERS.	
Uncle Sam Standard Head.	
3 inches, each	\$ 45
5 inches, each	52
8 inches, each	68
12 inches, each	1 02

Uncle Sam Insulated Head.	
3 inches, each	\$ 49
5 inches, each	57
8 inches, each	76
12 inches, each	1 14

SETS.	
Nail.	
V. & B.	
No. 100, in cardboard boxes	doz. \$1 55
No. 100, in wooden boxes	doz. 1 58
No. 30, assorted	doz. 39
No. 5, in cardboard boxes	doz. 1 35
No. 5, in wooden boxes	doz. 1 30

Rivet.	
V. & B.	
Farmers'	30 15
Tinners' 3-4	0 40
" 00-0	0 00

Saw.	
Atkins No. 10	per doz. \$3 30
" No. 12	" 6 30

SHEARS.	
Per Doz	
Nickel Plated, Straight, 6"	\$12 50
" " " 7"	14 85
" " " 8"	15 80
Japanned, Straight 6"	11 00
" " " 7"	13 40
" " " 8"	13 30

SHEARS, TINNERS' & MACHINISTS'.	
Viking	\$22 00

Lennox Throatless.	
No. 18	35%
Shear blades, (f.o.b. Marshalltown, Iowa.)	10%

Peerless Steel Squaring.	
Foot Power.	
No. 1—30", 18 ga. cap.	15%
No. 2—36", 18 ga. cap.	15%
No. 4—52", 18 ga. cap.	15%
No. 10—120", 22 ga. cap.	15%
No. 4A—52", 16 ga. cap.	15%

Cast Iron Foot Power.	
No. 01, 30", 18 ga. cap.	15%
Power Driven.	
(No. 100 Series, 2 Shaft Drive.)	
No. 142—42", 18 ga. cap.	15%
(No. 200 Series, 2 Shaft Underneath Drive.)	
No. 242—42", 14 ga. cap.	15%
(No. 300 Series, 3 Shaft Underneath Drive.)	
No. 342—42", 10 ga. cap.	15%
No. 372—72", 10 ga. cap.	15%
(No. 500 Series, 3 Shaft Underneath Drive.)	
No. 596—96", 10 ga. cap.	15%
(No. 600 Series, 3 Shaft Underneath Drive.)	
No. 6120—120", 3/16" cap.	15%

SHINGLES.	
Per Square	
Zinc (Illinois)	\$18 00

SHOES.	
Milcor.	
Galv. Std. Gauge, Plain or corr. round flat crimp	65%
26 gauge round flat crimp	40%
24 gauge round flat crimp	10%
Conductor	65%

SHOVELS AND SPADES.	
Coal.	
Hubbard's.	
No. A B C D	
1 \$16 00 15 10 14 45 13 70	
2 16 35 15 60 14 85 14 10	
3 16 75 16 00 16 25 14 48	
4 17 10 16 35 16 60 14 85	

Post Drains & Ditching.	
Hubbard's.	
Size A B C	
14" \$17 15 16 40 15 65	
16" 17 50 16 75 16 00	
18" 17 85 17 10 16 85	
20" 18 20 17 45 16 70	
22" 18 55 17 80 17 05	
Alaska Steel.	
D-Handle per doz.	\$3 50
Long Handle	" 3 00

SIFTERS.	
Genuine Hunters, doz.	\$2 50

SKATES.	
Ice, Men's and Boys'.	Per Pair
Key Clamp—rocker—bright finish	\$ 70
Key Clamp—rocker—nickel finish	1 10
Key Clamp—rocker—pol. steel	1 30
Key Clamp—Hockey	1 35
Skate outfits	4 75

Women's and Girls'.	
1/2 Key Clamp—rocker	\$1 21
" " " hockey	1 35
Ice Skate outfit	5 00
Roller.	
Ball Bearing—Boys'	\$1 50
Ball Bearing—Girls'	1 65

Make Your Own Elbows, Any Size in Two Minutes, with this Machine

Here is the Most Remarkable Machine ever made for the Sheet Metal Worker—just take your straight pipe—fasten the form or jig to it and in two minutes you have your 3 or 4 piece adjustable elbow all ready for use and *any size* you want.

PURNELL ELBOW EDGING AND CUTTING MACHINE

We can't begin to tell you details about the design, construction and equipment of this machine in this space. It is simple and sound and constructed of the very best materials—both installers and manufacturers are using it to save time and labor. It does away with a large stock for the installer and enables him to make his adjustable elbows any size for each job *et once* when he needs them.

Write today for circular giving complete description and price.

CHICAGO ELBOW MACHINE COMPANY

MAIN OFFICE: 826 N. Boulevard, Oak Park, Ill.

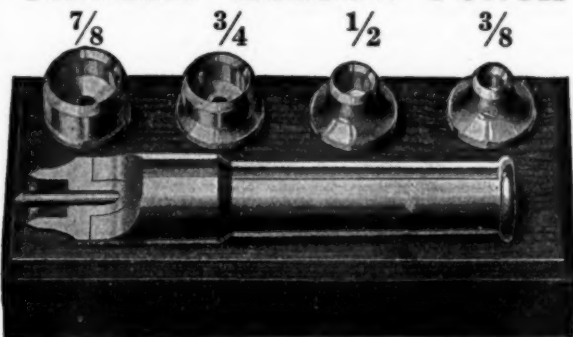
FACTORY: 562 W. Washington St., Chicago, Ill.



Elbows of No. 24 gauge and lighter

Range of capacity 7" to 36"

TINNERS' HOLLOW PUNCH



Write today for descriptive circular giving sizes and prices

WHITNEY METAL TOOL COMPANY

93 Forbes Street
Rockford, Illinois

CHICAGO STEEL CORNICE BRAKES STANDARD OF THE WORLD



THE BEST BRAKE FOR ALL PURPOSES
Most Durable, Easiest Operated, Low in Price
Made in All Lengths and to Bend All Gauges of Metal. Over 15,000 in use

WRITE FOR PARTICULARS

DREIS & KRUMP MFG. CO., 2915 S. Halsted Street, CHICAGO



TREADLE SHEAR

This TREADLE GAP SHEAR is made in all standard sizes for No. 14 and lighter gauge sheets. With it, sheets can be squared, trimmed or slit.

We make a complete line of shears, punches and bending rolls, all sizes for hand or belt drive. Write for Catalog "S."

BERTSCH & COMPANY

Cambridge City, Ind.

SAMSON HAND PUNCH RETAIL PRICE \$3.00



Extra Punches and Dies for Tool 40c Per Size

Handles Interchangeable Punches and Dies as Illustrated

Great Demand—Nationally Advertised

SIZES OF HOLES—PUNCH NO. 1

Perforates cardboard, leather and paper up to 1/8". Thru untampered metal up to 20 gauge.

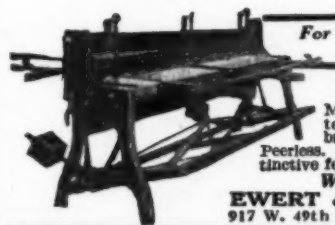
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THE MACHINE APPLIANCE CORPORATION
351 JAY STREET
BROOKLYN, N. Y.

Any Hardware Store

can always use new ideas to help increase its sales.

Be sure to read the pages of AMERICAN ARTISAN AND HARDWARE RECORD *every week*—you will secure ideas which *you* can use to help increase the sales of *your* hardware store.



For Perfect Cutting, Durability and Strength

PEERLESS STEEL SQUARING SHEARS

Made in all sizes, to cut any gauge of material. Foot or power treadle. No more breaking or twisting of trawls if you use a Peerless. You should know all about the many distinctive features of these STEEL Shears.

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